

# **Rocky Flats Environmental Technology Site**

# RECONNIASSINACE LEVEL CHARACTERIZATION

### CHEMICAL CHARACTERIZATION PLAN (PACKAGE)

### 865 CLUSTER CLOSURE PROJECT

(Buildings: 865, 866, 867 and 868)

**REVISION 1** 

July 18, 2001

Reviewed for Classification/UCNI/OU/O By: Janet Nesheim, Derivative Classifier DOE, EMCBC Date: 10-13-08

Confirmed Unclassified, Not UCNI

Prepared by:	David Babbs, Industrial Hygiene	Date: 7/18/01
Prepared by: _	Math Shafer, Environmental Compliance	Date: <u>07/8</u> 0/
Reviewed by:	Steve Latter, Quality Assurance	Date: <u>z/14/01</u>
Reviewed by:	Duane Parsons, Characterization Coordinate	Date:
Approved by:_	234,56 7 E 9 70	1/19/0)
MENT CLASSIFICATION MEN' WAIVER PER ISIFICATION OFFICE	NOV 2001 RECEIVED Page 1 of A 5 RECORDS CENTER  Page 1 of A 5 RECORDS CENTER	ADMIN RECC 8865-A-000016



BUILDING(s): 865, 866, 867, and 868

### **Assumptions and Notes:**

- This characterization package was prepared in accordance with MAN-077-DDCP, D&D
   Characterization Protocols, and Appendix D, Reconnaissance Level Characterization Plan
   for D&D Facilities, April 23, 2001
- RLCP Data Quality Objectives were used to develop this characterization package
- Data already exists for some contaminates of concern, only RLC data gaps are specified in this characterization plan. If areas are discovered during the removal plates, covers, etc. as the RLC progresses, these areas will be sampled as required. The 865 Cluster RLCR will report both existing data results and newly acquired RLC data results.
- Components of RCRA Units were not considered within the scope of this RLC Plan since they are covered under the RCRA Closure Program—All RCRA permitted units in B865 have been characterized by the permitting process (i.e., approved waste codes)—All RCRA units that have not been previously closed, will be closed in accordance with closure requirements specified in the Closure Plan, Section X, of the RCRA Part B Permit, which are also delineated in the RFCA RSOP for Component Removal, Decontamination and Size Reduction—Therefore, no additional chemical sampling is required for characterization of RCRA units and their components
- It is assumed that demolition debris will either be disposed of as PCB Bulk Product Waste or sampled during in-process characterization once site protocols are established based on current discussions with the Lead Regulatory Agencies concerning Building 111 Therefore painted concrete surfaces will not be sampled for PCBs in paint during the RLC If it is later determined that concrete demolition debris will be used for onsite recycled fill material, then additional PCB sampling will take place during in-process characterization
- Lead sampling is not required in the 865 Cluster All paint will remain a part of the infrastructure during demolition and therefore does not require sampling per Environmental Waste Compliance Guidance No 27, Lead Based Paint (LBP) and LBP Debris Disposal Sampling for lead for IH requirements will be at the discretion of the demolition contractor
- It is assumed that all potential materials that could contain ACM in B865 do contain ACM, therefore no additional asbestos sampling will be performed in B865
- It is assumed that all facility systems are potentially contaminated and will be disposed of as LLW or LLMW and will not affect the facility typing determination. Therefore, only exterior surfaces of facility system piping, ducting, conduit, plenums, equipment, etc. will be considered during the RLC.
- Only facilities that are anticipated to be Type 2 facilities were considered in this RLC Plan Anticipated Type 1 facilities (i.e., B827, C865, and Tank 25) will be characterized as part of the Type 1 facility RLC/PDS effort later in the project schedule



### **Instructions:**

- 1 Verify characterization activities are on the Plan-of-the-Day (POD)
- Perform a Pre-Evolution Brief and/or Job Task Brief in accordance with the Site Conduct of Operations Manual
- Werify personnel have appropriate training for the applicable tasks they will be performing
- 4 Comply with RWP and Beryllium Work Form (BWF) requirements, if applicable
- 5 Comply with facility PPE requirements, as applicable
- 6 Inform the Facility Manager, or designee prior to starting characterization activities

### WARNING

Confined space entry is NOT authorized during the performance of this plan (package)

- 7 Follow applicable characterization and sampling procedures
- 8 Have D&D craft perform the following, as required
  - Lift deck grating and access covers to assist in obtaining samples in trenches, pits and sumps. Use forklift with approved lift attachment, as necessary
  - Cut (using sawsall) deck grating and access covers, if necessary, to assist in obtaining samples in trenches, pits & sumps
  - Assist in accessing ventilation ducts for sampling, including removal of duct tape over the ends of ventilation pipes and entry into fan plenum(s)
- Notify Wackenhut Security (x2444) and the Shift Supervisor (x2914), and verify appropriate safety precautions/requirements are followed prior to accessing facility roofs
- 10 Coordination with the Environmental Restoration Program organization will be required to further characterize soils around and underneath facility foundations and slabs prior to removal
- 11 Collect and maintain all characterization paperwork in the Characterization Closure Project File(s), and all electronic data in the appropriate D&D RISS subdirectory

ASBESTOS		
Sample Location	Number of Samples	Sample location and justification/rational
865	0	It is assumed that all potential materials that could contain asbestos in 865 do contain asbestos, therefore no additional asbestos sampling will be performed in 865
866, 867 and 868	2	In Buildings 867 and 868, no building materials suspected of containing asbestos were located. These buildings are constructed of concrete pads & footers with a steel I-beam skeleton. The walls and roof are composed of corrugated metal with fiberglass batt insulation. The air handling units have rubber expansion joints. No thermal systems insulation or spray-on surfacing materials were observed. Therefore, no asbestos bulk samples were taken. Building 866 has the following suspected asbestos containing building materials corrugated, transite panels that form two external, protective walls at the entry to the building (88 sf), and above the double-door entry are (13) hard fittings (<6" OD) and 2-runs of steam and condensate piping (<6" OD) with fiberglass insulation and a white canvas covering. These steam lines enter from the top of the north wall. One core asbestos sample was taken from a condensate fitting, and one sample was taken of the canvas wrap.
Total Samples	2	Sample locations are specified on sample maps during characterization efforts. Samples were obtained in accordance with PRO-653-ACPR, Asbestos Characterization Procedure and 40 CFR 763

BERYLLIUM		
Sample Location	Number of Samples (smears)	Sample location and justification/rational
865	30	There is sufficient supporting sample data and process history that proves beryllium was used, stored and contained in this building. Hundreds of samples have already been collected throughout the facility, both random and biased. Therefore, only a limited number of biased sampling will be collected to further characterize data gaps in areas that are lacking supporting sample data such as trenches, pits, and sumps
866, 867 and 868	21	There is sufficient process history that proves beryllium was used, stored and contained in these buildings. Therefore, random samples will be obtained at locations specified on the sample maps.
Total Samples	51	Samples will be obtained at locations specified on sample map(s) in accordance with PRO-536-BCPR, Beryllium Characterization Procedure Biased sample locations will correspond with the most probable areas of dust accumulation (including beryllium dust), assuming airborne deposition

RCRA/CERCLA C	ONSTITIUEN	TTS
Sample Location	Number of Samples	Sample location and justification/rational
B865 Room 145	1 liquid sample	Based on historical process information, no unremediated spills have occurred, and visual observations revealed only one sample location the grate covered trench located in the east central portion of Room 145 (north of Room 145A) which contained used machinery oil. The trench oil was pumped out into two 55-gallon drums. No sludge was present in the trench after the used oil was removed, therefore, no sludge sample could be collected. An RLC sample of the used oil was collected from one of the 55-gallon drums and analysed for all toxicity characteristic contaminates (40 CFR 261 24, Table 1)
		No other RLC sampling locations were identified in B865 at this time. However, not all areas were accessible for inspection (e.g., floor pits and trenches in B865 that are currently covered with steel plating) and will therefore be evaluated for characterize during the steel plate removal activities for radiological RLC efforts
B866, B867 and B868	0	Based on historical process information, no unremediated spills are known to have occurred in these buildings and visual observation of accessible areas indicated no evidence of spills (e g, staining) Therefore, no RLC sampling locations were identified in these buildings at this time
Total Samples	1	Samples will be obtained at locations specified on sample map(s) in accordance with PRO-488-BLCR, Bulk Solids and Liquids Characterization Procedure Samples shall be analyzed for all toxicity characteristic contaminates (40 CFR 261 24, Table 1)

Sample Location	Number of Samples	Sample location and justification/rational
865 Cluster	0	Based on historical process information, no unremediated PCB spills have occurred in these buildings and visual observation of accessible areas indicated no evidence of spills (e g, staining). Therefore, no RLC sampling locations were identified in these buildings at this time
Total Samples	0	

<sup>\*</sup> PCB ballasts, fluorescent light bulbs, potential mercury switches in thermostats, and mercury vapor light bulbs will be identified and removed prior to demolition



# **Rocky Flats Environmental Technology Site**

## RECONNIASSINACE LEVEL CHARACTERIZATION

# CHEMICAL CHARACTERIZATION PLAN (PACKAGE)

### 865 CLUSTER CLOSURE PROJECT

(Buildings: 865, 866, 867 and 868)

REVISION 0

May 18, 2001

Prepared by:  Andre Gonzalez, industrial Hygiene	_Date: <u>5-/7-0</u>
Prepared by:  Min Shafe Envio, mental Compliance	Date: <u>05/80</u>
Reviewed by: Stove Luker Quality Assurance	_Date: <u>#/23/01</u>
Reviewed by: Duane Parsons Characterization Coordinator	Date: 5/23/01
Approved by: Kent Dorr KH Closure Project Manager	Date: 5/3/01
Superceded by Rev 1, dated 7/18/01 Page 1 of 4	

### RLC CHEMICAL CHARACTERIZATION PLAN (PACKAGE)

### BUILDING(s) 865 Cluster

- This characterization package was prepared in accordance with MAN-077-DDCP, D&D Characterization Protocols, and Appendix D, Reconnaissance Level Characterization Plan for D&D Facilities, April 23, 2001
- RLCP Data Quality Objectives were used to develop this characterization package
- Data already exists for some contaminates of concern, only RLC data gaps are specified in this
  characterization plan The 865 Cluster RLCR will report both existing data results and newly acquired RLC
  data results
- Components of RCRA Units were not considered within the scope of this RLC Plan since they are covered under the RCRA Closure Program
- Grating and metal floor plates that cannot be easily lifted by two sampling personnel will be sampled during in-process characterization
- It is assumed that demolition debris will either be disposed of as PCB Bulk Product Waste or sampled during in-process characterization once site protocols are established based on current discussions with the Lead Regulatory Agencies concerning Building 111 Therefore painted concrete surfaces will not be sampled for PCBs in paint during the RLC If it is later determined that concrete demolition debris will be used for onsite recycled fill material, then additional PCB sampling will take place during in-process characterization
- Lead sampling is not required in the 865 Cluster All paint will remain a part of the infrastructure during demolition and therefore does not require sampling per Environmental Waste Compliance Guidance No 27, Lead Based Paint (LBP) and LBP Debris Disposal Sampling for lead for IH requirements will be at the discretion of the demolition contractor
- Only facilities that are anticipated to be Type 2 facilities were considered in this RLC Plan Anticipated Type 1 facilities will be characterized as part of the Type 1 facility RLC/PDS effort later in the project schedule

### Instructions

- 1 Verify characterization activities are on the Plan-of-the-Day (POD)
- Perform a Pre-Evolution Brief and/or Job Task Brief in accordance with the Site Conduct of Operations Manual
- 3 Verify personnel have appropriate training for the applicable tasks they will be performing
- 4 Comply with RWP requirements, if applicable
- 5 Comply with JHA and facility PPE requirements, as applicable
- 6 Inform the Facility Manager, or designee prior to starting characterization activities
- 7 Follow applicable characterization and sampling procedures
- Notify Wackenhut Security (x2444) and the Shift Supervisor (x2914), and verify appropriate safety precautions/requirements are followed prior to accessing facility roofs
- 9 Coordination with the Environmental Restoration Program organization will be required to further characterize soils around and underneath facility foundations and slabs prior to removal
- 10 Collect and maintain all characterization paperwork in the Characterization Closure Project File(s), and all electronic data in the appropriate D&D RISS subdirectory

Superceded by Rev 1, dated 7/18/01.

ASBESTOS		
Sample Location	Estimated Number of Samples	Sample location and justification/rational
865 Cluster	200	A comprehensive asbestos building inspection has not been performed. Therefore, suspect locations will be sampled during a comprehensive asbestos building inspection of all 865 Cluster buildings
Total Samples	200	The exact sample numbers and locations cannot be determined until a comprehensive, invasive inspection is performed in accordance with 40 CFR Part 763, Subpart E Sample locations will be specified on sample maps during characterization efforts Samples will be obtained in accordance with PRO-653-ACPR, Asbestos Characterization Procedure and 40 CFR 763

Sample Location	Number of	Sample location and justification/rational
-	Samples (smears)	
865, 866, 867 and 868	0	There is sufficient supporting sample data and process history that proves beryllium was used, stored and contained in these buildings. Recently collected sample data satisfies the RLCP requirements and will be reported in the 865 Cluster RLCR. Therefore, no additional sampling is necessary.
Total Samples	0	

RCRA/CERCLA CONSTITUENTS		
Sample Location	Number of Samples	Sample location and justification/rational
B865 Room 145	sample location, 2 liquid samples & 2 sludge samples (if present)	This facility was used for research and development of non-plutonium metals Primary activities pertained to metalworking. Process waste was generated and stored during its operating history. Based on historical process information, no unremediated spills have occurred, and visual observations revealed only one candidate sample location, the grate covered pit located in the east central portion of Room 145 (north of Room 145A). A hazardous waste drum storage area was once located in room 145. RLC sampling requirements for Room 145 pit are as follows two liquid samples and two sludge samples (if present) and analyzed for all toxicity characteristic contaminates (40 CFR 261 24, Table 1). The samples will be taken at each end of the pit.  No other RLC sampling locations were identified in B865 at this time. However, not all areas were accessible for inspection (e.g., floor pits and trenches in B865 that are currently covered with steel plating) and will therefore be characterized during in-process D&D activities. It is recognized that during in-process D&D activities evidence of past spills may become apparent. Although in-process sampling is outside the scope of this RLC Plan, in-process samples should be collected in floor pits, trenches and any other area that becomes assessable during in-process D&D that has evidence of past spills.

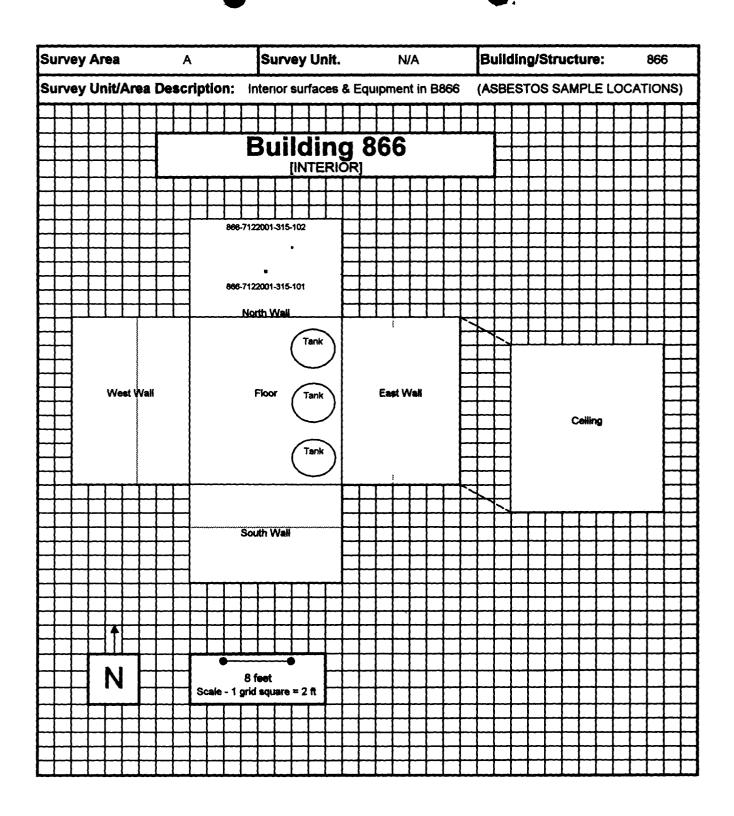
Superceded by Revl, dated \$18/01.

RCRA/CERCLA C	ONSTITIUE	NTS - Continued
B866, B867 and B868	0	These buildings make-up the B865 Cluster and provide a variety of support functions Based on historical process information, no unremediated spills have occurred in these buildings and visual observation of accessible areas indicated no evidence of spills (e.g., staining) Therefore, no RLC sampling locations were identified in these buildings at this time  It is recognized that during in-process D&D activities evidence of past spills may become apparent and will be sampled at that time
Total Samples	4	Samples will be obtained at locations specified on sample map(s) in accordance with PRO-488-BLCR, Bulk Solids and Liquids Characterization Procedure Samples shall be analyzed for all toxicity characteristic contaminates (40 CFR 261 24, Table 1)

PCBs		
Sample Location	Number of Samples	Sample location and justification/rational
865 Cluster	0	Based on historical process information, no unremediated PCB spills have occurred in these buildings and visual observation of accessible areas indicated no evidence of spills (e g, staining) Therefore, no RLC sampling locations were identified in these buildings at this time
		It is recognized that during in-process D&D activities evidence of past spills may become apparent and will be sampled at that time
Total Samples	0	

<sup>\*</sup> PCB ballasts, fluorescent light bulbs, potential mercury switches in thermostats, and mercury vapor light bulbs will be identified and removed prior to demolition

7/18/01. Superceded by Revl, dated <del>1/27/01</del> AAR 7/27/01



### **ASBESTOS SAMPLING**

**Building 867** 

No suspect ACM building materials Structure is composed of concrete pad and footer with steel I-beam skeleton, corrugated metal roofing and walls with fiberglass batt insulation. Rubber expansion joints on air handling units. No TSI or spray-on surfacing materials. No asbestos bulk samples taken.

**Building 868** 

No suspect ACM building materials Structure is composed of concrete pad and footer with steel I-beam skeleton, corrugated metal roofing and walls with fiberglass batt insulation. Rubber expansion joints on air handling units. No TSI or spray-on surfacing materials. Electrical transformer. No asbestos bulk samples taken.

**Building 866** 

Asbestos containing transite panels form two external, protective walls (88 sf) at the entry to the building. Above the double-door entry are 13 hard fittings (<6" OD), and two (2) runs of pipe (22 lf) insulated with fiberglass with a white canvas covering. These pipes enter from the top of the north wall and are for steam and condensate. The structure is composed of concrete pad & footers with a steel 1-beam skeleton, corrugated metal roof, and steel panel siding. There are three (3) fiberglass tanks with associated PVC piping and fittings. A core asbestos sample was taken from a condensate fitting, and a wrap asbestos sample was taken from the steam line.

**Building 879** 

The east wall (14' high by 92 lf) of the air handling equipment room adjacent to the plenum area is covered (1,288 sf) with a spray-on acoustical fireproofing Five (5) random bulk samples were obtained for asbestos analysis. Underneath the gray, spray-on is a layer of foam or Styrofoam. The wall substrate is concrete twin T's. In the southwest corner of the room are three (3) 55-gallon fiber drums. 1 Labeled "Potassium Hydroxide Solution, 45%", 2 Labeled "Empty", and 3 No readable label.

Andre Mile

# RESERVORS ENVIRONMENTAL SERVICES, INC.

NYLAR Acurathal Laboratory \$ 101896 TYPE Locused Laboratory \$ 34-0256

1
3
3
•
Ã
Ę
5
2
2
5
8
3
Ę
3
, i
2
3
٤
3
M BULK A
H
Z
T.
TABLE L. PLM
3
3
F

HIS 7844-LAZK (MC738R)	Krines-Hill Analytical Services Division	#1D(D73/20203020	BASS & BATT MULK ABRESTOR, JOHNSON	July 25, 2085	FLM Shart Report, Bulls Polet Count	4
RES Joh Namber	Cleat	Client Project Number / P.O.:	Client Project Description:	Date Sarapine Received:	Anakris Type:	

Turnaround:	<b>S S S S S S S S S S</b>	96					NON	NGT-
Cleat	3		2		1 Ch		Asbertoe	Fibrons
Sample	8	10 Number	4	ž		***	Hoers	Components
Wearher			> pq	Programa	8	Marcal Value of the Control of the C	Components (%)	<b>E</b>
879-07122001-315-101	ă	EM 554966	m < m	Yellow foam Gay fibrous micaceous planter	<b>\$8</b>	* *		007 02
879-8712288T-315-182	Ä	TBM 554987	<b>4</b> m	Yellow foam. Gray fibrous mississous pleafer	\$ 8	ZA	NAS O	2 3
#79-67122861-315-183	¥ .	15M 554928	∢¤	Yellow founs Gary fibrous micaccous pharter	Яĸ	Treat-Act 7	2 1 2	25.
879-67122001-315-164	<u> </u>	EM 554989	≪ ⊠	Yellow foam Gay filtrous micacoous plaster	# 8	~ ~	2 02	8 8
879-07123081-315-185	<u> </u>	EM. 554950	< 5	Yellow found Gray Edwas michocous planfor	~ %		6 R	2 3 5 8
101-315-10173-101	<u>¥</u>	ED.C. 554991	<	White reconsus noticial wieblic fibrans	W3	<b>-</b>	8	
			4	WORVER INSTITUTE. Gray fibrous plaster	8		61	
287-515-10021-CU-795-	ā	EM 554992	_<	White / silver erap	100		er er	25
	4		1					

ND = News Delected TR = Theor, < 1% Virtual Britain

Trues-Act = Tremoffe-Activation

i

	3		•	CHAIN	OF CUSTO	DY/SAMPI	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	QUEST	010	01D1073#001
1	REETS	_					RES 78840	0h:	Page 1	<u> </u>
(sapler(s)			~	(Executed)	Contact Regionales	ABBS, DAVID	31	Telephone No. 64814717		
OIDIO73	m			3	mpfing Origin 18279 & Space		2	Parchase Order/Charge Cade		
Project Title B166.4. B175	ofest Title Bissa a bety blunk asbestics			1	gbeok Na.		3	Orest No.	Temp.	
	Reservous Environmental	entri		1	Method of Shipment		3_	Wasterfayale bill na.		
Protecul	,			ä	Related COC (5 may)		77.8			
SKRLESKI skil pessov other lenous	POSSORIE SAAMTER KAZANDORNEZRARKS Are selé proservel samples DOT hemerbous per 40 CFR. Par CKL3 Toble UP 1 Are other forgren hezardone substances proseriO YES or NO	Charles charges 40 CFI I present YES a	K.P.st Co.S.3	Table UP YE	YES or NO	SCHEENING EXQUENCE	SPECIAL PROPRIETIONS	5. Hald Thee		
Bette No.	Outoner Naster	Meric	ă	Į.	Location	Crotmeter (Paris		Sm ple Analysis		Paties.
OHDHO73- 001 001	879-0712200% 315-101	I	2001	10:54 AM	8438	THAT IN	-	H02B001 (On-Sile Asbestos bulk PLM 9002) (Rouline)		News
0101073- 002 001	278-07-12001- 316-102	¥	2002	10:50 AL	£288	FNA/ NA.11	IHOZBOOT (On-Site Ast	IH02B001 (On-Site Asbestos bulk PLN 9002) (Routine)		None
0101073- 003.001	879-07122001- 315-143	¥	2001	TONG AM	BK78	1-WAINDAIN	IH02B001 (On-Site Asta IH02B006 (onshe Asber	H0ZB001 (On-Site Asbestos truit PLM 9002) (Routine). H0ZB005 (onshe Asbestos-pc PLM N8002) [Routine]	*	K!A None
. [	478-07122001- 315-104	I	2001	ICES MAN	BR78	I-NAT NACT	IHDZBOO1 (On-Sile Asb	IHOZBOO1 (On-Sile Asbestos bulk PLN 8002) (Roudne)		N.R. Yore
	679-071.22001- 316-105	*	2001	11:00 AM	8478	T-NA.I NO.II	IHOZBOO1 (On-Site Asb	HOZBOO1 (On-Site Asbestos bulk PLM 9062) (Routine)		HIS None
01D10T3- 006.001	#88-G7122001- 315-161	£	2002	me locut	58.582 56.582	1-KA/N/A.H	IHO2B001 (On-Sile Asi	IHO28601 (On-Site Asbestos bulk PLM 9002) (Routine)		N.A. Hone
	868-0712EOE1- 515-162	I	97.17.27 2005	71:31 AM	B696	HALINK II	IH028001 (On-Site Asia	H02B001 (On-Site Asbestos bulk PLM 9002) (Routine)		N.M Mone
Bellespelding Syr.		Davine	A project ( )		A	Deserting Resolutions By.	al By.	Destions Machinity		DateAu
Mingained By:		Destribus	A Paris		ā	Date/Date Balloquidad By:	d Dy.	Das/Time TonsinalDy.		Date/Date
Reikopaldad Dy		Detribue	Record By:		Ā	Date/Time Relinquided by	437	Den/Tipe Recting By-		Date/Bre
Pathopolobud By:	1 1	OuterClane	4		<b>S</b> Q	Describes Recognition By:		Desertions   Deserted By:		Date/Three
MALL SAMPLE	+	Myant bloked (e.g., extend to en		or, disposed of yar lide pr	a procedure, word in mady that press	(Machael)	Disposed By		Describes	

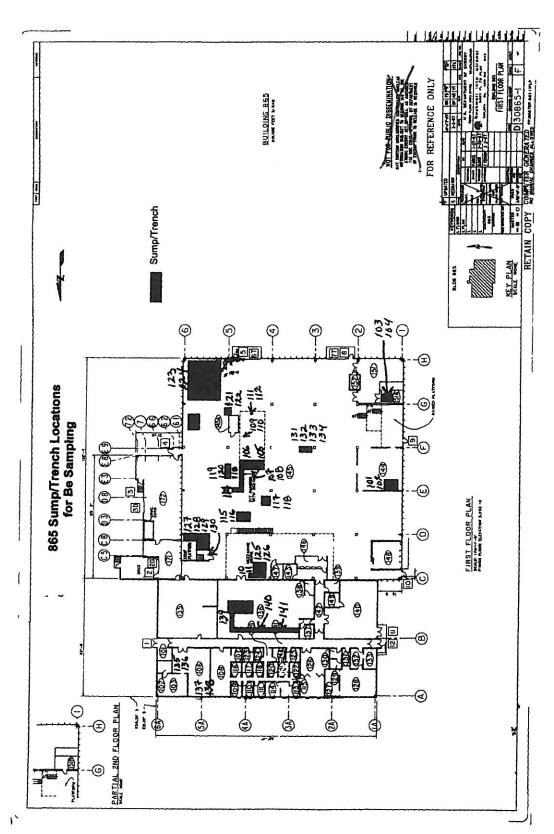
Rocky Flats Environmental Technology Site

RFP F 3791 32 (7/95) Formerly RF-47530

Golden, CO 80402-0464

Safety and Hygiene Chain of Custody Record and Analysis Request R/N 0/0/73

**o** Lab Number Time/Date Time/Date Time/Date Time/Date Page / ☐ Unbroken Bldg/Ext 7/194/x. 4447Date 7/12/61 Samples REMARKS Received by Received by Received by Received by Green - Sample Custodian Blue - Originator Condition of Seal Seal# (Release #) 5 TH028006 JOINT GOLVET ALL Signature \_\_\_ Comments FROM TRACE Persohal Area Relinquished by Relinquished by Relinquished by Relinquished by e  $\mathcal{C}$ Industrial Hygiene Sample Other MEDIA Asbestos Samples Other 文 Analysis Request Rush □ ~ Rush SAMPLE TIME/ ₹ ¥ Yellow - Lab Copy Push Rush 7-13-0 Time/Date Time/Date Time/Date Time/Date Standard Service VOLUME IHES Standard liters Service 好 Title. White - Return to Onginator ANALYZE FOR 24 3 Bases PO#/Release EED30120 Received by Received by Received by Received by RESERVOIRS arkerton ×.354 Name of Onginator Davis BABBS 6.5.Tweadwell Report and Billing Instruction 866-7122001-315-102 691 507 102 0 866-7122001-315-161 101 Verbal To. Report To Fax To Bill To SAMPLE NUMBER Bldg/Y/M/D/P#/S# 879-7122001-315-Refinduished by Relinquished by Relinquished by Relinduished by Ξ Kaiser-Hill DynCorp **RMRS** SSOC WSI



UNCLASSIFIED CONTROLLED
NUCLEAR INFORMATION

Reviewing J. A. NESHEIM, EMISC Class In Name Official.

EMISC Class In Name Official Date: 10 - 13 - 05

5

Shaded area = 100cm2

Date:

Empl.#:

Rocky Flats Environmental Techn. y Site Beryllium Wipe Sample Log

Page

RIN#

Signature Sampler (print). Employee # WCP# 315 業 Example 865-09022000-310 Sample Prefix 7242001 Date -Bldg. -865

Notes (Redeviations from 100cm2)																		والمراوان
Description 1	Bottom of Sump prt, north wall, honzonatal surface	Top edge of Sump pit, horizontal surface	Bottom of sump prt, northeast corner, horizontal surface	Bottom of trench, south central, horizontal surface	Stemens-Allis Ram, west side I-Bean, horizontal surface	Siemens-Allis Ram, north 6' prt, bottom, horizontal surface	Siemens-Alits Ram, north pit, extreme bottom (3' x 3') pit inside 12' pit, horizontal surface	Siemens-Alits Ram, north prt, bottom of 12' pit, vertical surface	Siemens-Allis Ram, bottom of central 4' prt, horizontal surface	Siernens-Alits Ram, bottom of central 4' pxt, horizontal surface	Siemens-Allis Ram, bottom of south 3' pit, horizontal	Siemens-Allis Ram, bottom of south 3' pit, top of pipe	L trench, NE of SA Ram, bottom horizontal surface	L trench, north L, bottom horizontal	DU Roller, south pit, bottom horizontal	DU Roller, north pit, bottom horizontal	6-Ton Scale, pit bottom, horizontal	
Point on turkey map																		
Room	144	144	151A	151A	145	145	145	145	145	145	145	145	145	145	145	145	145	
Sample Sequence #	101	102	103	104	105	106	107	108	109	110	111	112	113	114	116	116	117	

Date:

Empl.#:

Site Beryllium Wipe
š
Techno
<b>Environmental 1</b>
Rocky Flats

Page

e Sample Log RIN # Sample Prefix

IWCP#

Example 865-09022000-310

315 #

7242001 Date -

865 Bldg -

Sampler (print) Employee #.

Signature

Notes (te devlations from (00cm2)													· · · · · · · · · · · · · · · · · · ·												
Description of the second of t	5-Ton Scale, pit bottom, horizontal		cał Mil sump, NE corner, horizontal surface		Vertical Mill sump, NE corner, horizontal surface	ge Erie Press, bottom of 9' pit	ge Erie Press, bottom of 9' bit		Gray Ene Hammer Mill, SE corner, bottom of 12' pit		Gray Ene Hammer Mill, SE corner, bottom of 12' pit		y pri		y pit		BE Press, Conduit Trench		BE Press, Conduit Trench		BE Press, Conduit Trench	BE Press, Conduit Trench			
	5-To		Vertical	-	Ver	Orange	Orange		Gray		Gray		X-Ray p		X-Ray	_	BE P		98		98 P	98			
Point on Euryey map																									
Room		145	ţ	145	145	146	2	145		145		145		145		145		153		153	153		153		
Sample Sequence #		118	•	SLL	120	131		122		123		124		125		126		127		128	129		130		

Rocky Flats Environmental Technology Site Beryllium Wipe Sample Log

Page

Signature A Asside Sampler (print) Employee # RIN# WCP# 315 業 Example: 865-09022000-310 Sample Prefix 7252001 Date -Bidg -865

Notes (te deviations from 108cm2)														
Description 1923	Central sump put trench	Central sump prtsump cover	Central sump pit, bottom of pit	Central sump pit, bottom of pit	East furne hood, top of fluorescent flight	East furne hood, mwd-vertycal surface	West fume hood, inside rear sin	West fume hood, vertical surface	Machine shop, electrical conduit trench	Machine shop, electrical conduit trench	Machine shop, electrical conduit trench			
Point on survey map	0	0	0		<u>u</u>		>	<b>&gt;</b>	2	2	2			
Room	145	145	145	145	106	106	106	106	136	136	136			
Sample Sequence #	131	132	133	134	135	136	137	138	139	140	141			

Checked By (print/sign):

Shaded area = 100cm2

Date:

Empl.#:

Rocky Flats Environmental Technology Site Beryllium Wipe Sample Log

Shaded area = 100cm2 Page Employee # Signature Sampler (print) Date: On floor inside the pit, north of the X-ray pit On pape inside the pit, north of the X-ray pit Empl.# Description IWCP# Survey map \* Point on Example 865-09022000-310 6 Sample Prefix: Checked By (print/sign): **0**7262001 MOON! Date -145 145 Seguence Sample 9 7





# Cover Page

Report Identification Number

01K-0031-001

Subcontract Number

KH010066

Name of Industrial Hygienist

DAVID BABBS

Laboratory Identification Number

**DCHM** 

RIN

01D1321

Purchase Order/Charge Code

EED50120

Sample Information

		Laboratory	Line Item	Analytical	
	Customer Sample	Sample	Code	Batch	Sample
Bottle Number	Number	Number	(LIC)	Identification	Matrix
01D1321-001 002	865-7242001-315-101	01K00796	NR01A001	G017X01N	Filter
01D1321-002 001	865-7242001-315-102	01K00797	NR01A001	G017X01N	Filter
01D1321-003 001	865-7242001-315-103	01K00798	NR01A001	G017X01N	Filter
01D1321-004 001	865-7242001-315-104	01K00799	NR01A001	G017X01N	Filter
01D1321-005 001	865-7242001-315-105	01K00800	NR01A001	G017X01N	Filter
01D1321-006 001	865-7242001-315-106	01K00801	NR01A001	G017X01N	Filter
01D1321-007 001	865-7242001-315-107	01K00802	NR01A001	G017X01N	Filter
01D1321-008 001	865-7242001-315-108	01K00803	NR01A001	G017X01N	Filter
01D1321-009 001	865-7242001-315-109	01K00804	NR01A001	G017X01N	Filter
01D1321-010 001	865-7242001-315-110	01K00805	NR01A001	G017X01N	Fılter
01D1321-011 001	865-7242001-315-111	01K00806	NR01A001	G017X01N	Filter
01D1321-012 001	865-7242001-315-112	01K00807	NR01A001	G017X01N	Filter
01D1321-013 001	865-7242001-315-113	01K00808	NR01A001	G017X01N	Fılter
01D1321-014 001	865-7242001-315-114	01K00809	NR01A001	G017X01N	Filter
01D1321-015 001	865-7242001-315-115	01K00810	NR01A001	G017X01N	Filter
01D1321-016 001	865-7242001-315-116	01K00811	NR01A001	G017X01N	Filter
01D1321-017 001	865-7242001-315-117	01K00812	NR01A001	G017X01N	Filter
01D1321-018 001	865-7242001-315-118	01K00813	NR01A001	G017X01N	Filter
01D1321-019 001	865-7242001-315-119	01K00814	NR01A001	G017X01N	Filter
01D1321-020 001	865-7242001-315-120	01K00815	NR01A001	G017X01N	Filter
01D1321-021 001	865-7242001-315-121	01K00816	NR01A001	G017X01N	Filter
01D1321-022 001	865-7242001-315-122	01K00817	NR01A001	G017X01N	Filter
01D1321-023 001	865-7242001-315-123	01K00818	NR01A001	G017X01N	Fılter
01D1321-024 001	865-7242001-315-124	01K00819	NR01A001	G017X01N	Filter
01D1321-025 001	865-7242001-315-125	01K00820	NR01A001	G017X01N	Filter
01D1321-026 001	865-7242001-315-126	01K00821	NR01A001	G017X01N	Filter
01D1321-027 001	865-7242001-315-127	01K00822	NR01A001	G017X01N	Fılter
01D1321-028 001	865-7242001-315-128	01K00823	NR01A001	G017X01N	Fılter
01D1321-029 001	865-7242001-315-129	01K00824	NR01A001	G017X01N	Filter





# Cover Page

		Laboratory	Line Item	Analytical	
	Customer Sample	Sample	Code	Batch	Sample
Bottle Number	Number	Number	(LIC)	Identification	Matrix
01D1321-030 001	865-7242001-315-130	01K00825	NR01A001	G017X01N	Filter
01D1321-031 001	865-7252001-315-131	01K00826	NR01A001	G017X01N	Filter
01D1321-032 001	865-7252001-315-132	01K00827	NR01A001	G017X01N	Filter
01D1321-033 001	865-7252001-315-133	01K00828	NR01A001	G017X01N	Filter
01D1321-034 001	865-7252001-315-134	01K00829	NR01A001	G017X01N	Filter
01D1321-035 001	865-7252001-315-135	01K00830	NR01A001	G017X01N	Filter
01D1321-036 001	865-7252001-315-136	01K00831	NR01A001	G017X01N	Filter
01D1321-037 001	865-7252001-315-137	01K00832	NR01A001	G017X01N	Filter
01D1321-038 001	865-7252001-315-138	01K00833	NR01A001	G017X01N	Filter
01D1321-039 001	865-7252001-315-139	01K00834	NR01A001	G017X01N	Filter
01D1321-040 001	865-7252001-315-140	01K00835	NR01A001	G017X01N	Filter
01D1321-041 001	865-7252001-315-141	01K00836	NR01A001	G017X01N	Filter
01D1321-042 001	865-7262001-01-10	01K00837	NR01A001	G017X01N	Filter
01D1321-043 001	865-7262001-01-11	01K00838	NR01A001	G017X01N	Filter

I certify that this electronic image, and all hardcopies produced from this image, accurately represents the data and is in compliance with the RFETS specific requirements, both technically and for completeness, other than the conditions detailed above or in the sample data package narrative Release, by submission through email, the data contained in this electronic image and the computer-readable EDD (as applicable), has been authorized by the laboratory Manager or the Manager's designee

The Delivery and receipt of this Data Deliverable constitutes an invoice for payment for this Data Deliverable

Name Jason Kım Tıtle Chemist

Date August 30, 2001





# Case Narrative Page

Report Identification Number

01K-0031-001

Subcontract Number

KH010066

Name of Industrial Hygienist

DAVID BABBS

Laboratory Identification Number

**DCHM** 

RIN

01D1321

Purchase Order/Charge Code

EED50120

General Set Information: There are forty-three field samples in this batch of RIN # 01D1321 The samples were analyzed for beryllium in wipe No problems were encountered with receipt of these samples and no contact with the CTR was required

Method Summary: Samples were transferred to digestion vessels, and spiked with a 10 mL aliquot of 1 l Nitric Acid Samples were digested in microwave with pre-set program. After completion of digestion, samples were diluted to 25mL volume with ASTM Type II Water. Samples were shaken well and settled at least for 2 hours before the analysis. Samples were analyzed in a Flame Atomic Absorption Spectrometer. A clean representative portion of the digestate is aspirated and atomized in a flame. A light beam from a hollow cathode lamp is directed through the flame into a monochromator, and onto a detector that measures the amount of absorbed light. Measurement is integrated with instrument software and recorded.

Sample Preparation: All samples were prepared in accordance with DCL SOP, IH-AN-001 and modified NIOSH method NMAM 7300 for microwave digestion

Holding Times: The holding times were met for both sample preparation and analysis

Limit of Detection and Required Detection Limit: Limit of Detection (LOD) is 0 047 μg/sample for this modified NIOSH method NMAM 7300 which is determined from Method Detection Limit (MDL) study, and Required Detection Limit (RDL) is 0 10 μg/sample for this contract of the analysis

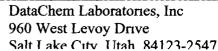
<u>Instrument Calibration</u>: Instrument calibration was performed in accordance with published procedures of NIOSH method NMAM 7300

Initial and Continuing Calibration Verification Analysis: Recoveries for the analyte in all Initial Calibration Verification (ICV) and Continuing Calibration Verification (CCV) samples are within the quality control limits of ± 10%

Initial and Continuing Calibration Blank Analysis: No analyte was found in any Initial Calibration Blank (ICB) or Continuing Calibration Blank (CCB) at levels above the absolute value of the RDL

Media Blank Analysis: No analyte was found in any Media Blank sample at levels above the LOD

Dilution(s): None were required



Phone (801) 266-7700 FAX (801) 268-9992

Web Page www datachem com E-mail lab@datachem com

22



# Case Narrative Page

<u>Laboratory Control Sample and Duplicate Analysis:</u> Three Laboratory Control Samples (LCS) and three Laboratory Control Sample Duplicates (LCSD) were prepared and analyzed Results for the analyte in the LCS's are within the control limits of  $\pm 20\%$  The Relative Percent Differences (RPD) between LCS and LCSD are within the control limits of 0% to 20%

Replicate Analysis: Replicate analysis was made from three field samples. One RPD between the sample and the replicate is within the control limits of 0% to 20%. The other two replicate analysis are negligible for because the results of the samples and its replicates are below the RDL.

### Flagging Codes:

- U Analyte is not detected above the LOD of 0 047 µg/sample
- B Analyte result is between the LOD of 0 047 μg/sample and the RDL of 0 10 μg/sample

Nonconformance/Corrective Action Report (NC/CAR): None were required

<u>Sample Calculation:</u> The final results are calculated by the following equations Final result for aqueous samples ( $\mu$ g/sample) = (A) x (B) x (C)

### Where

A = Analyte concentration from instrument determination ( $\mu g/mL$ )

B = Concentration factor from sample preparation

= Final Volume of Digestate (mL)

Sample

C = Dilution performed at time of analysis

Example Calculation  $(1 \mu g/L) \times (0.025 L/sample) \times (1) = 0.025 \mu g/sample$ 

Miscellaneous Comments: Sample 01K00801 and 01K00802 are filtered through Whatman Filter 41 Graded (Lot A552399) due to high content of oil residue prior to the analysis





# Report Page

Report Identification Number

01K-0031-001

Subcontract Number

KH010066

Name of Industrial Hygienist

**DAVID BABBS** 

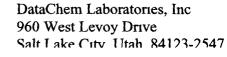
Laboratory Identification Number

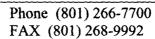
DCHM 01D1321

RIN Purchase Order/Charge Code

EED50120

	Laboratory Sample	Berylliun	n
Customer Sample Number	Number	μg/wipe	
865-7242001-315-101	01K00796	37	Γ
865-7242001-315-102	01K00797	60	
865-7242001-315-103	01K00798	15	
865-7242001-315-104	01K00799	0 33	
865-7242001-315-105	01K00800	0 82	
865-7242001-315-106	01K00801	18	
865-7242001-315-107	01K00802	0 12	
865-7242001-315-108	01K00803	0 42	
865-7242001-315-109	01K00804	0 10	U
865-7242001-315-110	01K00805	0 10	U
865-7242001-315-111	01K00806	0 10	U
865-7242001-315-112	01K00807	0 077	В
865-7242001-315-113	01K00808	60	
865-7242001-315-114	01K00809	18	
865-7242001-315-115	01K00810	0 15	
865-7242001-315-116	01K00811	0 74	
865-7242001-315-117	01K00812	0 31	
865-7242001-315-118	01K00813	0 97	
865-7242001-315-119	01K00814	0 70	
865-7242001-315-120	01K00815	0 63	
865-7242001-315-121	01K00816	0 071	В
865-7242001-315-122	01K00817	0 30	
865-7242001-315-123	01K00818	0 12	
865-7242001-315-124	01K00819	0 21	
865-7242001-315-125	01K00820	17	
865-7242001-315-126	01K00821	20	
865-7242001-315-127	01K00822	0 080	В
865-7242001-315-128	01K00823	0 13	
865-7242001-315-129	01K00824	0 43	
865-7242001-315-130	01K00825	2.5	











# Report Page

	Laboratory Sample	Berylliun	n
Customer Sample Number	Number	μg/wipe	
865-7252001-315-131	01K00826	0 33	
865-7252001-315-132	01K00827	28	
865-7252001-315-133	01K00828	0 19	
865-7252001-315-134	01K00829	0 25	
865-7252001-315-135	01K00830	16	
865-7252001-315-136	01K00831	3 1	
865-7252001-315-137	01K00832	0 26	
865-7252001-315-138	01K00833	18	
865-7252001-315-139	01K00834	0 10	U
865-7252001-315-140	01K00835	0 10	U
865-7252001-315-141	01K00836	0 10	U
865-7262001-01-10	01K00837	19	
865-7262001-01-11	01K00838	1 5	
Limit of D	etection (LOD)	0 0	47
Required Detection	on Limit (RDL)	0	10

- U Parameter not detected above LOD
- B Parameter between LOD and RDL





# QC Summary Page

Report Identification Number

01K-0031-001

Subcontract Number

KH010066

Name of Industrial Hygienist

DAVID BABBS

Laboratory Identification Number

**DCHM** 

RIN

01D1321

Purchase Order/Charge Code

EED50120

### Batch ID G017X01N

QC Sample	Sample		<b>T</b> T 4		TD.	Percent	Relative Percent
ID	Description	Analyte	Units	Result	Target	Recovery	Difference
BL-187742-1	Method Blank	Beryllium	μg/wipe	ND	NA	NA	NA
QC-187742-1	LCS	Beryllium	μg/wipe	25 0	25 0	100	NA
QD-187742-1	LCSD	Beryllium	μg/wipe	24 4	25 0	97 6	2 5
BL-187742-2	Method Blank	Beryllium	µg/wipe	ND	NA	NA	NA
QC-187742-2	LCS	Beryllium	μg/wipe	25 1	25 0	101	NA
QD-187742-2	LCSD	Beryllium	μg/wipe	25 2	25 0	101	0 068
BL-187742-3	Method Blank	Beryllıum	μg/wipe	ND	NA	NA	NA
QC-187742-3	LCS	Beryllıum	μg/wipe	24 6	25 0	98 5	NA
QD-187742-3	LCSD	Beryllıum	μg/wipe	24 6	25 0	98 3	0 17

LCS - Laboratory Control Sample

LCSD - Laboratory Control Sample Duplicate

NA - Not Applicable

ND - Parameter not detected above LOD

Percent Recovery = (Result / Target) \* 100 0

Relative Percent Difference = ((|LCS - LCSD|) / ((LCS + LCSD)/2 0)) \* 100



Deter 1 mile		Disposed By		disposed of per lab procedure used in analytical process	osed of per lab proced	ustomer disp	Premotal Method le g returned to customer	4	FINAS LAMBI F
	Roceives by	Direc i inc	Relinquished By	Date/Time	Y	Received By	Date/Time		Relinquished By
	Received By	Date/Time	Relinquished By	Date/Time	y	Received By	Date/Time		Reinquished By
				Card Illin		Received By	/Date/Time		Roundquished By
8/28	Received By	Z'	Redundant Park	Date Lune	X3 P		1, ol /1500	F2-30 A	Relipqushed B
OZ None	ysis) [303]	NR01A001 (Beryllium Filter Analysis) [303]  DateTime   Received By	1+ILIEK/NA NR	B865 1+1	7 00 AM	07/24/ 2001	FILTER	865-7242001 315-107	01D1321- 007 001
Ol None	ysis) [ada]	NR01A001 (Beryllium Filler Analysis) [345]	1	B865 1+II	7 00 AM	07/24/ 2001	FILTER	865-7242001- 315-106	01D1321- 006 001
SGD None		NR01A001 (Beryllum Files Anterior) (240)		B865 1-F-E	7 00 AM	07/24/ 2001	FILTER	865-7242001 315-105	01D1321- 005 001
Gg None	Asis) [and]	NR01A001 (Beryllium Filter Analysis) [345]		8865 1 FIL	7 00 AM	07/24/ 2001	FILTER	865 7242001- 315-104	01D1321- 004 001
% None	ysis) [3dS]	NR01A001 (Beryllum Filter Analysis) [3d5]		8865 1-FIL	7 00 AM	07/24/ 2001	FILTER	865-7242001 315-103	7
97 None	(SIS) [3dS]	NR01A001 (Beryllum Filter Analysis) [3dS]	1-FILTER/N/A NRI	8865 1.FIL	7 00 AM	07/24/ 2001	FLTER	865-7242001 315-102	7
	/sis) [3dS] OIK 00796	NR01A001 (Beryllium Filter Analysis) [3d5]	1	B865 1 FIL.			FILTER	865-7242001- 315-101	<u>'  </u>
Packing	7815	Sample Analysis		Location (suze/t	Time	Date	Малх	Customer	Bottle No
		PECIAL INSTRUCTIONS HOW IN	SCREENING SP REQUIRED		ble II? YES of NC	0 136.3 Tr	MARKS lous per 40 CFR P present? YES or	POSSIBLE SAMPLE HAZARDS/REMARKS Are acid preserved samples DOT hazardous per 40 CFR Part 1363 Table II? YES of NO Are other known hazardous substances present? YES of NO ** ** **	POSSIBLE SAM Are acid preserve Are other known i
	001 REV1	010101-00776-001 REVI	ı		Related COC (if any)				Protocol
		4533 2127 PRE		rethod of Shipment FEDERAL EXPRESS	Method of Shipment FEDERAL EXPRE		s, inc	DataChem Laboratories, Inc	To (Lab) Data
		N/A Rill of Lading/Air Bill No		٩	V/A			RS	roject Title
	Temp.	Ice Chest No		oragon.	Samping 1			_	RIN 01D1321
	Charge Code	640] Purchase Order/		JOHNSEN SHELLY	(tume/date) JOHNSI	(tunn			Sampler(s) BABBS, DAVID
Page i of		03/-01	(-00	0	IALLY OF	2		RFETS	æ
01D1321#002		CHAIN OF CIISTODY/SAMPLE ANALYSIS REQUEST	MPLE A	S/AGOLSIL	AC NIVE	3			H





H			3	HAIN	OF CUSTOI	Y/SAMP	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	01D	01D1321#002
								Page	2 of 5
RIN 01D1321			<u> </u>	Contact/Requestor JOHNSEN SHELLY	SHELLY		Telephone No 6401		
Bottle No	Customer	Matnx	Date	頂	Location	Contranct (size/type/quantity	Sample Analysis		Preservative Packing
0401321	P65-7242001	FILTER	07/24/	7 00 AM	B865	1-FILTER / N/A	A NR01A001 (Beryllium Fifter Analysis) [3dS]	75	N/A
008 001	315-108		2007			V		01/00/803	None
01D1321-	865-7242001	FILTER	07/24/	7 00 AM	B865	1-FILTER / WA	A NR01A001 (Beryllium Filter Analysis) [3dS]		YY :
009 001	315-109		3					70	None
01D1321-	865-7242001 315-110	FILTER	07/24/ 2001	7 00 AM	B865	1-FILTER / NVA	NR01A001 (Beryllium Filter Analysis) [3dS]	92	None
	2010004	כוו זבס	186120	7 00 444	D865	1 FILTER / N/A	A NPO1A001 (Bendlium Filter Analysis) [345]	170	N/A
01D1321- 011 001	315-111	<u> </u>	2001	8	3	<u> </u>		8	1
01D1321- 012 001	865-7242001 315-112	FILTER	07/24/ 2001	7 00 AM	B865	1 FILTER / N/A	A NR01A001 (Beryllium Filter Analysis) [3dS]	sj 07	N/A None
01D1321- 013 001	865-7242001 315-113	FILTER	07/24/ 2001	7 00 AM	B865	1 FILTER / N/A	A NR01A001 (Beryllium Filter Analysis) [3dS]	80	N/A None
01D1321- 014 001	865-7242001 315-114	FILTER	07/24/ 2001	7 00 AM	B865	1 FILTER / N/A /1	A NR01A001 (Beryllium Filter Analysis) [3dS]	3] 05	N/A None
01D1321- 015 001	865-7242001- 315-115	FILTER	2001	7 00 AM	B865	1-FILTER / N/A	A NR01A001 (Beryllium Fitter Analysis) [3dS]	o) [s	N/A None
01D1321- 016 001	865-7242001 315-116	FILTER	2001	7 00 AM	B865	1 FILTER / N/A	A NR01A001 (Beryllium Filter Analysis) [3dS]	<i>)</i>	None None
01D1321- 017 001	865-7242001 315-117	FILTER	07724/ 2001	7 00 AM	B865	1 FILTER / N/A	A NR01A001 (Beryllium Filter Analysis) [3dS]	الا ح	N/A None
01D1321- 018 001	865-7242001- 315-118	FILTER	07/24/ 2001	7 00 AM	B865	1-FILTER / N/A	NR01A001 (Beryllium Fitter Analy	5] [5	N/A None
Reimphished by	M 08-83	Date/Time	Received By	\(\times_{\infty}\)	a		国民	XX	Date/Time 8/8/61 (0,0
Ken quished By.		<del>+</del> -	2		ā	Date/Time Reluqu	Relinquished By Date/Tune Received By		DateTime
Reimquished By		Date/Time	Received By	À	٥	Date/Time Relinqu	Reinquished By DateTime Received By		Date/Time
Relmquished By		Date/Time	Received By	£.	Q .	Date/Time Relinqu	Reinquished By DatoTane Received By		Date/Time
FINAL SAMPLE	Disposal Meth	od (eg returned to ca	ustomer disp	osed of per lab	of (e.g. returned to customer disposed of per lab procedure used in analytical process)	al process)	Disposed By	Date/Fine	
DISPOSITION	-   								





H			ט	HAIN (	OF CUSTOD	Y/SAMPL	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	01D1321#002	1#002
			3	9	tota		Telephone No	ì	
UN 0401321			2	JOHNSEN SHELLY	SHELLY		1	Pre	Preservative
Borde No	Customer	Matnx	Date	Time	Location	Container (size/type/quantity)	Sample Analysis		Packing
T.	865-7242001 315-119	FILTER	07724/	7 00 AM	B865	1 FILTER / N/A	NR01A001 (Beryllium Filter Analysis) [3dS]	OK Co 8/4 None	6
1.	865-7242001 315-120	FILTER	2001	7 00 AM	B865	1-FILTER / N/A	NR01A001 (Beryllium Fitter Analysis) [3dS]	N/A   5   None	9
1.	865-7242001 315-121	FILTER	2001	7 00 AM	B865	1-FILTER / N/A		NA None	9
01D1321- 022 001	865-7242001 315-122	FILTER	07/24/ 2001	7 00 AM	B865	1-FILTER / N/A		None (7)	9
01D1321- 023 001	865-7242001 315-123	FILTER	07/24/ 2001	7 00 AM	B865	1-FILTER / N/A		None 8	9
01D1321- 024 001	865-7242001 315-124	FILTER	2001	7 00 AM	B865	1-FILTER / N/A		NA None	98
01D1321- 025 001	865-7242001 315-125	FILTER	2001	7 00 AM	B865	1-FILTER / N/A		07	96
01D1321- 026 001	865-7242001 315-126	FILTER	07/24/ 2001	7 00 AM	B865	1 FILTER / NVA		None None	98
01D1321- 027 001	865-7242001-	FILTER	07724/ 2001	7 00 AM	B865	1-FILTER / N/A		7	. 49
01D1321- 028 001	865-7242001- 315-128	FILTER	2001	7 00 AM	B865	1-FILTER / N/A	NR01A001 (Beryllium Fifter Analysis) [3dS]	2	- e
01D1321- 029 001	865-7242001 315-129	FILTER	2001	7-00 AM	B865	1-FILTER / NVA	NR01A001 (Beryllium Filter Analy	None 12	ne Date/Time
Reinguished by	L'C-30	7-ol //Sa		3	1		ushed By Late I time Received by Late I time Received By Late I time Received By Late I Late	12 S/20	
Kelinquished By	30	1	Received By	200		Date/Time Relinqui	CARGO I MICK		Date/Time
Relinquished By		Detc/Time	Received By	By		Date/Time Relinqui	DateTime		
Relinquished By		Date/Time	Received By	A A		Dute/Time Relinqui	Reinquished By DateTime Recerved By		Date Line
ETVAT CAMPLE	) <b>-</b>	od (eg. returned to c	nestomer das	posed of per la	Desposal Method (e.g. returned to customer disposed of per lab procedure, used in analytical process)	cal process)	Disposed By	Date/Time	





Page 4 of 5   5   5   5   5   5   5   5   5   5	B				HAIN	OF CUSTOI	Y/SAMPL	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	COC# 01D	01D1321#002
17/221- 852-722001   FILTER   07724   70 AM   8965   1-FILTER   MRO1A001 (Beryllum Filter Analysis)   345]   MA   MRO1A001 (Beryllum Filter Analysis)   345]   MRO1A001   MRO1A001   MRO1A001 (Beryllum Filter Analysi									- 1	٥
Command   Comm	RIN 01D1321			<u>0</u>	ontact/Regue JOHNSEN	SHELLY		Telephone No 6401		
1965-722201   FILTER   07024   700 AM   8865   1-FILTER   NM   NRO1-A001 (Beryllum Filter Analysis) [345]   Mone   1965-722201   FILTER   70054   700 AM   8865   1-FILTER   NM   NRO1-A001 (Beryllum Filter Analysis) [345]   22   None   1-FILTER   NM   NRO1-A001 (Beryllum Filter Analysis) [345]   22   None   1-FILTER   NM   NRO1-A001 (Beryllum Filter Analysis) [345]   22   None   215-134   2001   2001   2004   2	Bortle No	Customer	Майпх	Date	Time	Location	Container (size/type/quantity)	Sample Analysis		Preservative Packing
Bees	Ŀ	865-7242001	FILTER	07/24/	7 00 AM	B865	1-FILTER / N/A			2 2
1865-722201   FILTER   2003   7.00 AM   8865   1 FILTER I VM   NRO1A001 (Beryllum Filter Analysis) [345]   WAN   1867-12201   FILTER   WAN   NRO1A001 (Beryllum Filter Analysis) [345]   WAN   1867-12201   FILTER   WAN   1867-12201   FILTER   WAN   NRO1A001 (Beryllum Filter Analysis) [345]   20							VII. 0. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1.			_
865-7222001   FILTER   07728/ 700 AM   B865   1 FILTER / N/A   NRO14001 (Beryllum Filter Analysis) [345]   NA   NR	,	865-7252001 315-131	FILTER	07/25/ 2001	7 00 AM	<b>B865</b>	1+ILIER/ WA			None
1865-7252001   FILTER   2001   7 00 AM   8865   1 FILTER / VM   NRO1AQO1 (Beryllum Filter Analysis) [3dS]   28   None   151-134   2001   7 00 AM   8865   1 FILTER / VM   NRO1AQO1 (Beryllum Filter Analysis) [3dS]   29   None   151-134   2001   7 00 AM   8865   1 FILTER / VM   NRO1AQO1 (Beryllum Filter Analysis) [3dS]   29   None   215-135   2001   7 00 AM   8865   1 FILTER / VM   NRO1AQO1 (Beryllum Filter Analysis) [3dS]   29   None   215-135   215-13	١,	865-7252001 315-132	FILTER	07/25/ 2001	7 00 AM	B865	1 FILTER / NVA			
1565-7262001   FILTER   07725/1   7.00 AM   8965   1-FILTER / IVA   NR01A001 (Beryllium Filter Analysis) [345]   2/5   None   1565-7262001   FILTER   07725/1   7.00 AM   8965   1-FILTER / IVA   NR01A001 (Beryllium Filter Analysis) [345]   3/5   None   1565-7262001   FILTER   07725/1   7.00 AM   8965   1-FILTER / IVA   NR01A001 (Beryllium Filter Analysis) [345]   3/5   None   1565-7262001   FILTER   07725/1   7.00 AM   8965   1-FILTER / IVA   NR01A001 (Beryllium Filter Analysis) [345]   3/5   None   1565-7262001   FILTER   07725/1   7.00 AM   8965   1-FILTER / IVA   NR01A001 (Beryllium Filter Analysis) [345]   3/5   None   1565-7262001   FILTER   07725/1   7.00 AM   8965   1-FILTER / IVA   NR01A001 (Beryllium Filter Analysis) [345]   3/5   None   1565-7262001   FILTER   07725/1   7.00 AM   8965   1-FILTER / IVA   NR01A001 (Beryllium Filter Analysis) [345]   3/5   None   1565-7262001   FILTER   07725/1   7.00 AM   8965   1-FILTER / IVA   NR01A001 (Beryllium Filter Analysis) [345]   3/5   None   1565-7262001   FILTER   07725/1   7.00 AM   8965   1-FILTER / IVA   NR01A001 (Beryllium Filter Analysis) [345]   3/5   NA   1565-7262001   FILTER   07725/1   7.00 AM   8965   1-FILTER / IVA   NR01A001 (Beryllium Filter Analysis) [345]   3/5   NA   1565-7262001   FILTER   07725/1   7.00 AM   8965   1-FILTER / IVA   NR01A001 (Beryllium Filter Analysis) [345]   3/5   NA   1565-7262001   FILTER   07725/1   7.00 AM   8965   1-FILTER / IVA   NR01A001 (Beryllium Filter Analysis) [345]   3/5   NA   1565-7262001   FILTER   07725/1   070 AM   100-0706   10	01D1321- 033 001	865-7252001 315-133	FILTER	07/25/ 2001	7 00 AM	B865	1 FILTER / N/A			
15-135   1	01D1321- 034 001	865-7252001 315-134	FILTER	07/25/ 2001	7 00 AM	B865	1-FILTER / N/A /1			
1965-1282001   FILTER   700 AM   8865   1 FILTER   NIA   NR01A001 (Beryllium Filter Analysis) [3dS]   3   Nana		865-7252001 315-135	FILTER	07/25/ 2001	7 00 AM	B865	1 FILTER / N/A			
115-137   120	,	865-7252001 315-136	FILTER	07/25/ 2001	7 00 AM	B865	1 FILTER / N/A			N/A None
- 865-7252001         FILTER         07/25/1         7 00 AM         B865         1 FILTER / NA         NR01A001 (Beryllium Filter Analysis) [3dS]         3/5         None           - 865-7252001         FILTER         07/25/1         7 00 AM         B865         1 FILTER / NA         NR01A001 (Beryllium Filter Analysis) [3dS]         3/5         None           - 865-7252001         FILTER         07/25/1         7 00 AM         B865         1 FILTER / NA         NR01A001 (Beryllium Filter Analysis) [3dS]         3/5         None           - 865-7252001         FILTER         07/25/1         7 00 AM         B865         1 FILTER / NA         NR01A001 (Beryllium Filter Analysis) [3dS]         3/5         None           315-139         2001         Pate/Time         Recaved By         Analysis	1.	865-7252001 315-137	FILTER	07/25/ 2001	7 00 AM	B865	1 FILTER / N/A			
- 865-7252001         FILTER         700 AM         B865         1-FILTER / N/A         NR01A001 (Beryllium Filter Analysis) [3dS]         3/5         NVA           - 865-7252001         FILTER         2001         7 00 AM         B865         1-FILTER / N/A         NR01A001 (Beryllium Filter Analysis) [3dS]         3/5         NVA           - 865-7252001         FILTER         2001         7 00 AM         B865         1-FILTER / N/A         NR01A001 (Beryllium Filter Analysis) [3dS]         3/5         NVA           1/1         2001<		865-7252001 315-138	FILTER	07/25/ 2001	7 00 AM	B865	1 FILTER / N/A			
1-   865-7252001   FILTER   077251   7.00 AM   8865   1-FILTER   WA   NR01A001 (Beryllium Filter Analysis) [3dS]   35   NVA   NN AMPLE   Date/Time   Recerved By   Date/Time   Date/Time   Recerved By   Date/Time   Recerved By   Date/Time   Date/Time   Recerved By   Date/Time   Recerved By   Date/Time   Date/Time   Recerved By   Date/Time	T .	865-7252001 315-139	FILTER	07/25/ 2001	7 00 AM	B865	1-FILTER / N/A			
Date Time   Recerved By   Date Time   Recerved By   Date Time   Relinquished By   Date Time   Recerved By   Date Time   Date Time   Recerved By   Date Time   Recerved By   Date Time   Date Time   Recerved By   Date Time   Date Tim		865-7252001 315-140	FILTER	07/25/ 2001	7 00 AM	B865	1-FILTER / N/A /1			None None
Date/Time Received By Date/Time Received By Date/Time Redunquated By Date/Time Received By Date/Time Date/Time Date/Time Date/Time Date/Time Date/Time Received By Date/Time Date/Time Date/Time Received By Date/Time Date/Time Received By Date/	Religionashed By	8	1.5	Received	\$3 \frac{\frac{1}{2}}{2}	α		Desertine (X)	Jak	Date/Time
Date/Time Received By Date/Time Redunquished By Date/Time Redunquished By Date/Time Received By Date/Time Redunquished By Date/Time Received By Date/Time Redunquished By Date/Time Redunquished By Date/Time Date/Time Disposed Method (e.g. rehumed to customer disposed of per lab procedure used to analytical process) Disposed By Date/Time Date/Time	Reimquished-By	3		Received B	i.	q		Date/Time		Date/Time
Date/Time Received By Date/Time Relanguabed By Date/Time Received By Date/Time Received By Date/Time Date/Time Received By Date/Time	Reimquished By		DateTime	Received B	,	Q		Date/Time	Ву	Date/Time
Disposal Method (e.g. returned to customer disposed of per lab procedure used to analytical process) Disposed By	ReImquished By		Date/Time	Received B	Α.	Q	_	Date/Time	Ву	DateTime
	FINAL SAMP DISPOSITIO	<b>—</b>	d (e g returned to cu	istomer disp	osed of per lab p	rocodure used in analytic	al process)	Disposed By	Date/Time	





			S	HAIN	OF CUSTOI	Y/SAMP	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	EQUEST	010	01D1321#002
		· <u> </u>		!					Page 5	of <u>5</u>
RIN 01D1321			ŭ	Contact/Requestor JOHNSEN SHELLY	stor SHELLY		Telephone No 6401	0		
Bottle No.	Customer	Matrix	Date	Time	Location	Contamer (szze/type/quantity	(4	Sample Analysis		Preservative Packing
01D1321- 041 001	865-7252001 315-141	FILTER	07/25/ 2001	7 00 AM	B865	1-FILTER / N// /1	1-FILTER / N/A NR01A001 (Beryllium Filter Analysis) [3dS]	Filter Analysis) [30	ısj ⊙(K,00,83≼	N/A None
01D1321- 042 001	865-07262001- 01-10	FILTER	2001	7 00 AM	B865	1-FILTER / N/A	A NR01A001 (Beryllium Filter Analysis) [3dS]	r Filter Analysis) [30		N/A None
01D1321- 043 001	865-07262001 01 11	FILTER	07/26/ 2001	7 00 AM	B865	1-FILTER / NVA /1	A NR01A001 (Beryilium Fitter Analysis) [3dS]	ı Filter Analysis) [3c	ısı 🛠	N/A None
			T							
					*	10 mage				
Reingruphed By	.00	Das Time	Received By	\\ \tilde{\chi}	Ā	Date/Time Refinqu	Reinquished By:	Date/Time Received By	1	Date/Time
Kelminushed By		Date/Time		1	Ğ	Date/Time Relinqu	Reinquished By	Date/Time Received By		Date/Time
Reinquished By		Date/Time	Received By		8	Date/Time Relinqu	Reinquished By	Date/Time Received By	93	Date/Time
Reimquished By		DateTime	Received By		ă	Date/Time Relinqu	Relaquished By	Date/Time Received By	By.	Date/Time
FINAL SAMPLE	-	d (e g returned to cu	storner dispo	sed of per lab p	Disposal Method (e.g. returned to customer disposed of per lab procedure, used in analytical process)	i process)	Disposed By		Date/Time	

			Property	Waste	Sample
TO THE THE A CUTE TO X A	* TT 4 (TS)				_
RELEASE EVA Page 1	LUATI	ON FOR	M		i
Release Evaluation No 010724-00116-001 EXTENDED	NO	EXPIRES	N/A	Charge No	N/A
PART I		SENDER/CU	STODIAN A	ACKNOWLED	GEMENT
Description of Property/Waste/Sample To Be Released/Tran included as an attachment to this release evaluation	ısferred• B	eryllium smear	rs from B865	Sample number	rs are
Current Location: B865					
Destination. DataChem Laboratories, Inc , 960 West LeVoy Di	rive, Salt La	ake City, Utah,	84123		
New Recipient/Custodian. Same as above					
History/Process Knowledge Beryllium smears were taken fro known contamination and are posted as a CA/HCA The isotope				3865 These area	as have
Has the specified material ever been in an RBA/CA or contacted	i DOE cont	rolled radioact	ive materials?	Yes	
1) By signing below, I certify information provided in Part I of t 2) By signing below, I agree to comply with the specific require					
Sender/Custodian David Ba			Date <u>7/2</u>	5/01 Ext 4	717
PART II			RADIOLO	GICAL ENGI	NEERING
SPECIFIC REQUIREMENTS AND/OR COMMENTS					j
The isotope of concern is depleted uranium					
Sender/Custodian Provide package that only contains beryllium smears to CASI for gamma spectroscopy analysis Provide Radiological Engineering (Arlan Moore) with a copy of the gamma spectroscopy analysis for TBD-00139 interpretation. Retain and make available the chain of custody and survey records for all samples shipped under the conditions of this release evaluation. The sender shall provide the shipper a copy of this release evaluation with appropriate documentation along with the samples being shipped to the receiving analytical laboratory.					
CT Perform contamination surveys in accordance with RSP 7 02 of the external of each shipping package Acceptance criteria all not exceed 20 dpm/100cm² (alpha) or 1000 dpm/100cm² (beta) Perform necessary actions for onsite shipment to CASI for imma spectroscopy analysis (1 e , completed RAM transfer tag)					
CASI Ensure all requirements of this release evaluation have be documentation for auditing purposes	en satisfied	l prior to shipn	nent Retain d	all release evalud	ation
For IATA purposes, gamma spectroscopy acceptance criteria sh	all be as foi	llows			
Depleted Uranium 509 pCi/g (specific activity) or total activi	ty of the pa	ckage not to ex	cceed 472 nCi		
DATACHEM LABORATORIES, INC , OPERATES UNDER THE DIVISION OF RADIATION CONTROL RADIOACTIVE MATER ON MAY 31, 2002	E UTAH DE YIAL LICEN	EPARTMENT C ISE UT 18002	OF ENVIRON 37 AMENDM	MENT QUALIT (ENT 10 THAT I	Y EXPIRES
These samples are being shipped as non-radioactive in accordan	nce with IA'	TA Dangerous	Goods Regul	ations	Ï

3) Rev 08/98

### PROPERTY/WASTE RELEASE EVALUATION SIGNATURE REQUIREMENTS

010724 00117 001

Reicase Evaluation #. UIU/24-0011	.0-001		Page 2 01
Evaluated Ja Radiological Engineer		Date 7/74	Ext3050
APPR	ROVAL FOR TRANSFER/S	HIPMENT	
The samples specified in Part 1 of this release of materials in accordance with Department of Treconstitute an unrestricted release	<b>~.</b>		-
Approved Radiological Engineer	Emp No	Date	Ext

### Release Evaluation for Waste:

Dalance Frankers H.

A Release Evaluation for Waste requires an evaluation and unrestricted release approval signature. The evaluation signature is by the Radiological Engineer (RE) providing the methods or criteria for unrestricted release (i.e., survey requirements, analytical requirements, no survey required, etc.). The unrestricted release approval signature for a Release Evaluation for Waste shall be a RE authorized to provide unrestricted release approval. In addition, the evaluation and unrestricted release approval signatures shall not be the same RE. The intent of this provision is to provide peer review of the evaluation and method of unrestricted release. It is important the RE take the peer review process seriously and not become a "rubber stamp" for their fellow engineer.

### Release Evaluation for Property:

A Release Evaluation for Property requires an evaluation and unrestricted release approval signature For a Release Evaluation for Property, the evaluation and unrestricted release signature may be the same RE In the past, only one signature was required for property for which a RE could provide an unrestricted release on the basis of process knowledge/history

### **Release Evaluation for Samples:**

Samples are any waste or material that is being shipped to an off-site facility for analysis. Samples that may be provided with an unrestricted release using process knowledge/history or standard contamination survey techniques may be authorized for shipment to an off-site facility using the signatory requirements specified for property. Samples which cannot be provided with an unrestricted release using process knowledge/history or standard contamination survey techniques shall be authorized for shipment from the Site using the methodology specified for waste, i.e., second signature being provided by a RE authorized to perform peer review and approval for shipment

# PROPERTY/WASTE RELEASE EVALUATION SIGNATURE REQUIREMENTS

010724-00116-001	Page 3 of
	010724-00116-001

The approval for transfer/shipment section of a Sample Release Evaluation (SRE) shall be revised as noted below for samples which cannot be provide with an unrestricted release

"The samples specified in Part 1 of this release evaluation are being provided with authorization for transport as non-radioactive materials in accordance with Department of Transportation (49 CFR) regulation This authorization for shipment does not constitute an unrestricted release"

### **Additional Documentation:**

Number of lines per section may be modified or additional pages attached to ensure adequate documentation of information necessary to perform release evaluation

Additional pages or attachments to a release evaluation shall have the evaluation number, Page \_\_ of \_\_, initials of Radiological Engineer signing approval for transfer/shipment and date

34 Rev 08/98

@RAH

### Britten, Jay

This release evaluation (REN # 010724-00116-001) applies to the following Beryllium sample numbers

865-7242001-315-101 thru 865-7242001-315-130

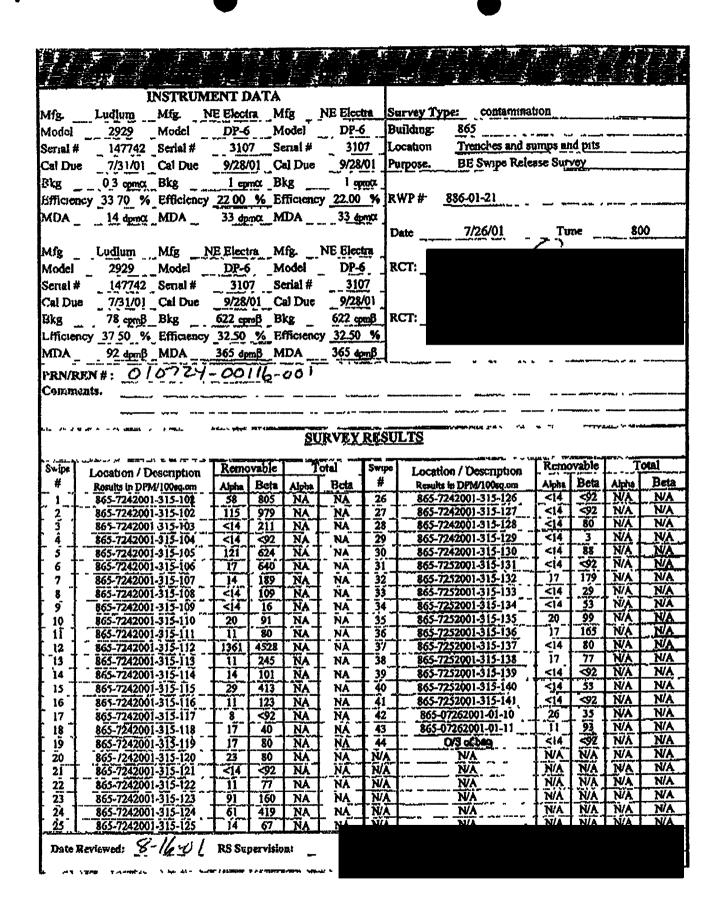
865-7252001-315-131 thru 865-7252001-315-141

865-07262001-01-10 thru 865-07262001-01-11

Any additional samples will require further evaluation for radiological characterization

Jay M. Britten
RISS Radiological Engineering
Omega Consultants, Inc
(303) 966-3050 (office)
(303) 212-5254 (pager)
e-mail jay.britten@rfets.gov

RAD SAFETY



H				CHAIN OF	. —	Y/SAMPL.	CUSTODY/SAMPLE ANALYSIS REQUEST	UEST	cac."	01D1321#001	,
	RFETS	_							Page	1 of 1	Al
Sampler(s)			2	(breatch)	Contact/Requester JOHNSEN, SHELLY/BA	BBS, DAVID	Tetep	Telephone No.			JG-2
RIN 01D1321				Ÿ.	Sampling Origin Bises		Parch	Purchase Order/Change Code			21-2
Project Title Abox BE SMEARS	S			17	ogbook Na.		Dec	esi Na.	Temp		2001
To (Lab) Canben	Canberra Mobile Lab Service	Service		-	Method of Shipment		To III at	Bill of Lading/Air Bill No.			TU
Protocok				<u> </u>	Related COC (If acry)		PRE				E 0
POSSIBLE SAMPLE HAZARDSRENLARKS An acid preserved semples DOT Lazardous per 40 CFR Per 136.3 Table 51º YES of NO	Z KAZARDS/RE mpies DOT tazm	MARKS four per 40 CFR	Per 13637	Table 57" YI	ES or NO	SCREENING REQUIRED	SPECIAL	INSTRUCTIONS Hold Time SAMPLES WHOM ARE CONSIDERED I OBJECT FOR GAMBIA SPEC	IR GANDIA SPEC		7:48
ON 10 CET 1. TET ON THE PROPERTY OF THE PARTY OF THE PART		Poter 123 of	<b>?</b>			CI					am si
Borle Ma.	Customer	Makir	300	Trae	Locasica	Contrier feizebweiersenfret		Semple Acadysas		Paservative,	JRFA
01D1321-		OBJECT			B865	1-GINAA	RC10B101 (DOT-Lab-N/std ISOCS-pCug) [24hrR]	td ISOCS-pcug) [24]	F.	None	CE
001 001										None	WAT
											ER F
											X
											FAX I
											NO. 30
											3 966
Reinqueched By-		Date/Time	Received By		ξ.	Date/Line Reluquated By		Date/Time Received By		Date/Line	7991
Refinquisted Uy		Deserture	Received By:		Ä	Date Time Reductived By		Date Time Received By-		Dagrane	
Relagaised By-		DateTiere	Reemal Br.		Des	Deserved Relayashed By		Describe Received By		DateTanc	
Ke.mqwichea By.		DaterTiens	Reserved By-		Den	Dee Tine Refuguerad By		Dare Tabe   Received By		DateTime	P
FINAL SAMPLE DISPOSITION	Disposal Merhad (e.g., warrest to recomer, deposed of per 156 proceedins,	A Market to a.	comer, d.spon	ed of per lab	proceduse, used in studdard process)	(season)	Disposed By		DesTon		02

Rocky Flats Environmental Technology Site

RFP F 010202 (02/01) Formarly RF 3791 32

iny frans Environmental recommoness of 10808 Hwy 93 Golden, CO 80403-8200

RIN # 010132 | PRE# 010724-00/16-001

Safety and Industrial Hygiene Chain of Custody Record and Analysis Request

4.24/8-20-6 8.210 LAB NUMBER Time / Date Time / Date Unbroken 12061 Condition of Seal ō REMARKS Page Received by ] Broken Seat# (Release#) Comments Signature Date 8-15-01 NROIAOO 上するとなるがん Relinquished by Relinquished by Ansagas. Industrial Hygiene Sample AREA BULK ろいパを Bidg/Ext: 71/74/47/7 2 Rush Asbestos Samples Analysis Request **∢**(€) 10-12-81 MEDIA Time / Date 24 Rush Time / Date 3:15 Randard Sawlos 24:41 Sample Time Volume Liters Name of Originator Davis BABSTitle: IHES 17/2/3/23 Received by Received by ANALYZE FOR BABBS.KH Be Report and Billing Instruction 124 LA 1237 1-3242001-315-103 -7242661-315-162 365-7242001-315-105 201 10 -72420C1-315-112 \*\*\*\*\*\*\*\* - 3151 - 10+ EED SOIZO 1242001-315-10 - 7242001 - 315-Bldg/Y/M/D/P#/S# H5-7242001-315-- 7242001-315-2420C1-315-Relinquished by LCKLBOX Relinquished by -724201-315-Sample Number - 7242001-315--7242001-315 865- 7242CE1-315 -7242601-315 7242001-315 -7242001-315 -7242001-315 -7242001-315 -7242M1-365 - 7242CC1 - 3,5 -7242001-315 -7242001-315 865-7242001-315 -7242001-315 クランダ -7242001-315 883 NECESTS Verbal To Report To #0# Fax To

2

White - Return to Originator Yellow - Lab Copy Pink - Sample Custodian Gold - Originator

RFP F 010202 (02/01) Formerly RF-3791 32

## Rocky Flats Environmental Technology Site

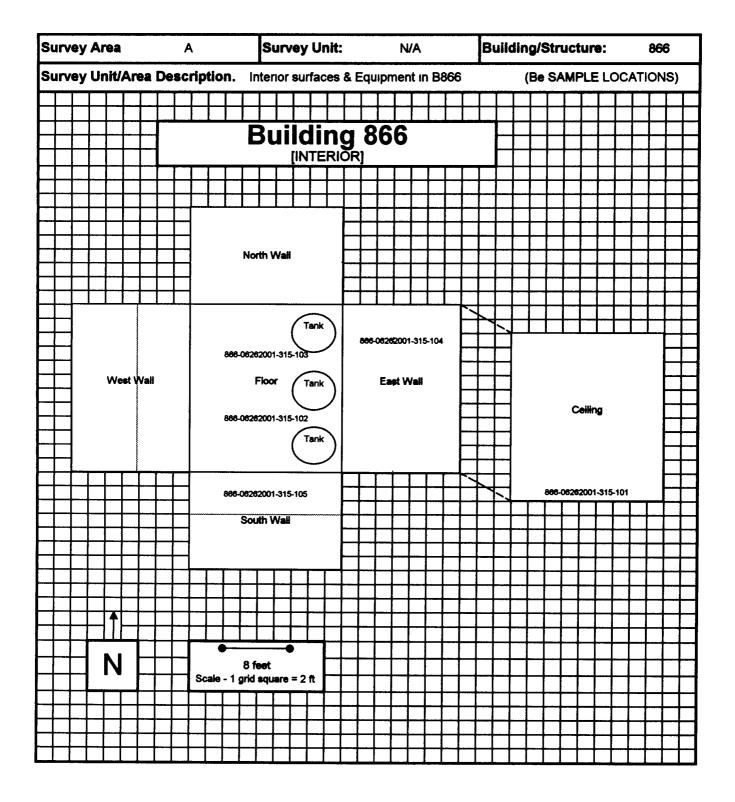
10808 Hwy 93 Golden, CO 80403-8200

Safety and Industrial Hygiene Chain of Custody Record and Analysis Request

RIN # 0 1 D 1 3.2 (
PRE # 0/0 72 4-00/16-00/

4.24/8-20-0 10-12-8/905 LAB NUMBER Time'/ Date Time / Date KNADLE to Verit \_ Unbroken O Condition of Seal Page 2 of Are other known hazardous substances present?

YES ONO DD Are acid preserved samples DOT Hazardous per 40 CFR Part 136 3 Table II" YES or (NO) REMARKS PED NOCK BAX NAOLAGOL Received by ☐ Broken Seal # (Refease # Comments Signature 8-15-01 White - Return to Originator Yellow - Lab Copy Pink - Semple Custodian Gold Originator Relinquished by Ans 0235 Relinquished by Date 18-21-01 (Jas. Janes) Industrial Hygiene Sample PERSONAL AREA BULK SW.1PE Bidg/Ext: 71/74/47/7 Asbestos Samples **Analysis Request** 3.15/8-20-01 MEDIA Time / Date Time / Date 24 Rush ストンスカルター/4-22/ Sample Time Volume Liters 4- 3335 Received by Received by Title. ANALYZE FOR Be EED SDIZE Verbal Tos HVID DARBS KH, X. Name of Originator: 24 74 125 Report To Javia Sass. KH -7252001-365-140 365 -7252001-315-14 7242001-315-130 -7242001-315-128 7242001-315-129 るく -7252001-315-13 865-07262001-01-10 15-7252001-315-131 1242001-315-12 865-07262001-01-1 Relinquished by Relinquished by Bldg/Y/M/D/P#/S# 7252001-365-252001-315-Sample Number さんところ 365-7252001-315 - 7252001-315 125201-315 883 LECKEUS 404 Fax To 383 860



urvey	/ Area	•		E	3		Sı	ır	<b>/e</b>	yι	Jn	it:		·	N	/A		В	uik	lin	g/S	Str	uct	tur	<b>e</b> :		367	
urvey	/ Unit/	Are	a [	Des	BCI	ipt	io	n:	ı	nte	rio	rs	urfa	ace	s &	Eq	uipi	ner	it in	B8	67	(Be	SAI	MPL	E LC	CAT	NON	IS)
++	++	H	ᅥ		Ш	_	<u> </u>	_	<u>_</u>		<u>_</u>			<u></u>	<u>_</u>	<u></u>	Ļ	<u> </u>	<u> </u>	┢	╁╴	╁	╁	╁	╁	╁	╁	╁
								B	J	111	Q		n	g	Öt	) /						T	T	T		上	仜	T
		$\square$	$\Box$								N.	ŢΕ	RK	<u> DR</u>									$\Box$	oxdot		oxdot	$\Box$	Γ
++	1-1-	Н			Н		<u> </u>	<u> </u>	1	4	4		<b>!</b>	┞	↓_	<b>!</b>	₩	<b>—</b>	_	<b> </b>	↓_	┡	╄	↓_	1	╄	₩	↓
++	+	Н			Н		├-	⊢	╀	+	+		┝	╀	┢	⊢	╀	├	_	├	⊢	├	╁	╀	╁	╀	╀┈	╀
++	++	Н	-1				E	Ŀ	±	1	Ⅎ	_	_	╀	┢	┢┈	╁┈	-	┢	┢	┢	┢	╁╌	╁	╁	╁	╁╴	╁
		H	7									t		1								Ī	t	T		亡		T
	Ш	П	$\Box$			No	orth	Wa	n H																	匚		L
++	┦	Н	-4									F	_	<u> </u>	L	<b> </b> _	_	_	<u> </u>	_		-	╀-	╄-	╀	╄	╀	Ļ
+-+	11		+									+	Ц	<u> </u>	Ц		┝	$\vdash$	-	_	$\vdash$	┢	╁	╁╴	$\vdash$	╁	╁	╁
1-11																	$\vdash$		K		T	$t^{-}$		T	T	T	$\Box$	t
			j																		86	7-06	2620	01-3	15-10	11	T	
$\prod$																	L		L								F	Ĺ
+															:		$\vdash$	$\vdash$	<u> </u>								┝	╀
++			- [														$\vdash$	-									H	t
															;						86	7-06	2620	01-3	15-10	2		İ
$\Box$												1			;											_		I
4-4	867-06262	001-3°	15-														⊢			ŀ							F	┞
╂┼╢	10-	4	ļ									ļ					<del> </del>	H	┝╌								┝	┞
+H												1					┢										<b>-</b>	t
Ш												ı									86	7-06	2620	01-3	15-10	3	L	L
$\Box$			1									ı	_															L
+H	West	Wall	Ī				Flo	or				1	E	ast '	wa	11	L	H	_								╁	┞
+H			ı		867	-062	6200	)1-31	15-1	05		ı					┢	┝					Cel	ling			H	H
			ı									ı																Ĺ
П																											F	L
++	41		1									١					<b>-</b>	$\vdash$	Н								-	┞
+-+					867-06262001-315-106								⊢	Н	-								┝	╀				
111			- 1						67.N	6262	004 :	145.	_		П								r	t				
Ш									~, ~	10		-10-				867-06262001-315-110												
$\prod$			- 1																									
╁╫													$\vdash$	Н	Н	867-06262001 315-109				H	┞							
++													$\vdash$	Н	-					H	H							
																867-06262001 315-109				H	T							
	TT	П	⇉						$^{\dagger}$					$\square$														
+		${oldsymbol{arphi}}$	4		867	_	6200					Н	<u> </u>	<u> </u>	<u> </u>	<u> </u>	Н	7	Ų									L
+-+-	++-	${oldsymbol{dash}}$	$\dashv$			S	outi	ı W	/all			Н	_	-		$\vdash$	-		-			_	F	F		F	F	$\vdash$
11		H	ᅦ									Н		Н	-		Н	Н	H				t	t	T	$\vdash$		t
	Ш		⇉						Γ	Ι	I																	
+	- -	oxdot	1	4	$\sqcup$				L	$\bot$	1	_											_	L		<u> </u>		L
++	╁┤╇	${oldsymbol{arphi}}$	$\dashv$	$\dashv$			$\vdash$	_	$\vdash$	╀	+	$\dashv$	H	$\vdash$	_	<u> </u>	Н	Н	-	Н	H	-	-	-	⊢	⊢	H	┝
++	╁┸┸	$\dashv$	┪	-	1		_	_	_	<u> </u>	_	_		_	Н	-	Н	Н	H		-		╁	$\vdash$	$\vdash$	$\vdash$	$\vdash$	┢
++	l N	<b> </b>	┪	-	$\dashv$				8	fe€	ŧ	•			H	-	Н	Н				-	+-	$\vdash$	<del>                                     </del>	$\vdash$		H
++	1 ' 1	'	+	┪	$\dashv$	Sc	ale	- 1				иe	= 2	ft	$\vdash$	Н	H	H	$\vdash$	Н		-	┢	t	t	$\vdash$	Н	H
++	-	$\dashv$	$\dashv$		$\dashv$		_		Ť	Т	Т	7				-	Н	Н	H			<u> </u>	$\vdash$	H	┢	$\vdash$	H	H
廿十		口	寸							I	1																	
T T				7					Г	Т	Т												Г	Г	_			Г

Su	Irv	ey	Ar	ea	•			(	0		S	un	/e)	, U	nıt				N/	A		В	uile	din	g/\$	Str	uct	tur	<b>e</b> :		86	38	
Su		ey	Ur	nt/	Ar	ea	De	SC	rip	tio	n:	ir	nte	ior	su	rfac	es	& E	qu	pn	nen	t ın	В8	68	(Be	S	AM	PL	EL	00	AT	101	NS)
_	_	┞	┞	<b>-</b>	L	4	ļ		上		<u> </u>	<u></u> _	上		Ţ			上		<u> </u>	<u>Ļ</u> .		<u>_</u>	<u></u>	L_	<u> </u>	↓_	↓_	╄	┡	▙	┡	↓_
$\dashv$		_	╀	╀	┞	+	ł					E	31	Πİ	1	di VTE	n	a	8	86	8						$\vdash$	╀	┼	├-	╀	┢	╀
	_	-	├	┢╌	┞	╁	┨					_	_	_	TIN	JTE	RI	S.	"								$\vdash$	╁	+-	$\vdash$	╀	╁	╁
	$\neg$	-	╌	十	╁╴	╁╴	Н	T	Т	Т	Т	T	Т	Т	۳	T	T	Ť	╁	T	Т	Т	Т	Т	Т	Т	t	╁	╁╴	H	╁╴	1	╁╴
$\neg$		t	<del>                                     </del>	一	T	╁╴	╁╴	t	t	十	1	十	T	╁	t	+	T	┪	1	H	T	†	t	1		一	t	t	┢	1	1	1	1
		Т	1		Г	T		T	T	T		T	T	†	T	1	1	T		T	1	T		1	Т	T		Τ	Τ	Г			Ī
								Ι		F		1		1		1	$\Xi$																
					L	L			L									L								L							
		L			L		$oxed{oxed}$		L	]		N	orth	W	all .			L	L				L					L		L			
	_	<u> </u>	ļ_	_	L	4	↓_	↓_	┺	4		•••					L	↓_	_	<u> </u>	<u> </u>	_			<u> </u>	L.	<u> </u>	↓_		_		L	_
$\dashv$	_	-	┡	₽_	Ι-				<u>L</u>	+	_86	8-06	2620	01-3	15-1	06_	+	L_		<u> </u>		Ļ	┞	-		┞	╄			<b> </b> _		lacksquare	
$\vdash$	_	$\vdash$	1	₩	Н												-					尸	1	<del> </del>	+-	Ͱ	╀	-	┼	-	Ͱ	-	-
닉	-	├	$\vdash$	╁─	Н																	<b> </b> -	├	-	<del> </del>	├-	┝	╀	├-	-	⊢	-	╁
$\dashv$		$\vdash$	$\vdash$	<del>                                     </del>	Η						26	8-06:	2620	01-3	15-1	05							$\vdash$	<del> -</del>	卜	t	Щ	1	<u> </u>	Ц.,	Щ		4
Н		┢	t	t	Н						-	J 504	_02(		, -,	<i>-</i>						<b>-</b>	$\vdash$	H	t	1							H
		$\vdash$	1		Н					ļ												Г	Г	$\vdash$	厂	1							<b> </b>
			T		П					1													Г			1							٦
										l																1							
											868	8-06:	2620	01-3	15-1	04	- [									]							
					Ц					l															匚	]							
	_	<u> </u>	<u> </u>	<u> </u>	Ц	W	est	Wa	H				Fk	ЮГ				Ε	ast \	Val	ı	L.		L		Ì							
_	_	<u> </u>	_	<u> </u>	Н					1							-					<u> </u>	_	_	_	ł							L
		_	ļ	<b> </b>	Н																	<u> </u>	<u> </u>	<u> </u>	_			1	Cell	ng			┝
$\dashv$		⊢	⊢	-	Н																	<b>-</b>	├-	├	┢	1							$\vdash$
$\dashv$	$\neg$		┢	$\vdash$	Н					l							-					<b>-</b>	$\vdash$	├-	<del> </del>	ł							┝
7	$\dashv$	┝	┝		H.	868-0	^^^		~46	]								<b>~~</b> ~	~~~	204		-	┢	⊢	<del> </del>	ł							H
_	ㅓ	_	┢		H	868-0	6262 10		315-								ľ	68-0	6262 102		315-	_		$\vdash$	┪	1	86	8-062	26200	)1-31	5-10	3	<b> </b>
┪	$\neg$	┢	Н		Н					l							-			-		┝		┢	<u> </u>	i							H
7					Ħ												- 1					Г		Т		1							卜
						Т	T	Π	Π					<del>-,,,,,</del>			1	Г	Ī	Γ	Π	1				1							
						L				]		_												<u></u>		i							
$\Box$		Щ			L	$\perp$	L			1		Sc	outh	W	Hi						$oxedsymbol{oxedsymbol{oxedsymbol{eta}}}$				<u>\</u>	L_	,			_			$\perp$
_	_	<u> </u>	_		_	丰	<b> </b> _	↓_	L	1							L	L	<u> </u>	lacksquare	<u> </u>	1	L	$ldsymbol{ldsymbol{eta}}$	<b> </b>		L	<u> </u>	L	_	_		
4		$\vdash$	_		L	╀	<b>L</b>	╄	<u> </u>	二		<b>—</b>	F	F	L	Ŧ	<u> </u>	<b> </b> _	<u> </u>	$\vdash$	<u> </u>	<b>_</b>	<u> </u>	$\vdash$	<u> </u>	_	<u> </u>	<u> </u>		<u> </u>			_
4	_	$\vdash$	<u> </u>		μ.	╁	-	₩	1	₩	$\vdash$	⊬	-	$\vdash$	╁	+		-	$\vdash$	-	├-		$\vdash$	<del> </del>	-	-	├-	$\vdash$	-	-	<b> -</b> -	_	-
	}	$\vdash$	-	Ш	Ц.	+	}-	$\vdash$	┝		Ļ	느	<u></u>	Ц.	느	1	╂	┝	⊢	├-	-	-	$\vdash$	$\vdash$	<del> </del>		⊢	$\vdash$	<del>                                     </del>	-	$\vdash$	$\vdash$	-
$\dashv$	{	Щ		N	l	$\vdash$	-	╂—	ł	•					•		1-	├-	₩	$\vdash$	-	├-	<u> </u>	$\vdash$	<b> </b>	<b> </b>	<b>—</b>	₽	-	<u> </u>	H	L	-
4		$\vdash$		N		<u> </u>	1	1_	٥	cale	_ 1 .	ם האמו	feel	i Hara	· = '	<b>2</b> #	<b>—</b>	1	<b>—</b>	$\vdash$	<del> </del>	<b>!</b>	<u> </u>		Ш	<b>-</b>	<u> </u>	<b>_</b>		<u> </u>	<u> </u>	_	Н
4	_	<u> </u>	_	-	_	4	┞	<b> </b>	Ľ	<del></del>	- 1	<u>م بح</u>	· બ્ય		, - ,	T .	1	1	<u> </u>	<u> </u>	⊢	<u> </u>	<u> </u>		<u> </u>	<u> </u>	<u> </u>	1	_	<b> </b>	L.,		_
$\dashv$		<u> </u>	H	H	_	╀	┞	╀	<b> </b> -	⊢	-	₩	╀	╀	╀	╀	├-	├-	$\vdash$	-	<del> </del>	<del> </del>	<u> </u>	<b>—</b>	$\vdash$	-	<del> </del>	$\vdash$	-	_	$\vdash$	$\vdash$	$\vdash$
-{	-{	-	-	Н	-	+	$\vdash$	Ͱ	├	⊢		<del> </del>	├-	╀	╁	╀	╀	┝	⊢	<u> </u>	-	-	$\vdash$	$\vdash$	$\vdash$	-	-	-	$\vdash$	$\vdash$	$\vdash$	<b>-</b>	$\vdash$
$\dashv$	$\dashv$	-	$\vdash$	Н	-	+	$\vdash$	+-	-	$\vdash$	1	$\vdash$	+	╁	╁╌	+	╁	-	-	-	$\vdash$	-	-	$\vdash$	-	$\vdash$	$\vdash$	1			$\vdash$		
$\dashv$	-	Н	$\vdash$	H	-	+	$\vdash$	t	┢	┢	$\vdash$	<del>                                     </del>	†-	╆	t	╁╴	╁	┢	$\vdash$	_	-	<del>                                     </del>	$\vdash$	$\vdash$	$\vdash$	<del> </del>	<u> </u>	$\vdash$	$\vdash$	-	-	$\vdash$	H
$\dashv$	7	М	_	H	_	十	一	ſ	1	1	$\vdash$	一	t	一	✝	十	$t^-$	T		$\vdash$	$\vdash$	<del>                                     </del>		Н	H				$\Box$		Н	Н	М
1	-			Н	_	T	T	<del>                                     </del>	1	$\vdash$		$\vdash$	T	1	T	†	1			Т							Т						Н

4)





### Cover Page

Report Identification Number

01K-0007

Subcontract Number

KH010066

Name of Industrial Hygienist

D Babbs

Laboratory Identification Number

DCHM

RIN

01D1003

Purchase Order/Charge Code

EED50120

**Sample Information** 

Sample Information	T		T	1	T
		Laboratory	Line Item	Analytical	
	Customer Sample	Sample	Code	Batch	Sample
Bottle Number	Number	Number	(LIC)	Identification	Matrix
01D1003-001 001	866-06262001-315-101	01K00224	NR01A001	G0165018	FILTER
01D1003-002 001	866-06262001-315-102	01K00225	NR01A001	G0165018	FILTER
01D1003-003 001	866-06262001-315-103	01K00226	NR01A001	G0165018	FILTER
01D1003-004 001	866-06262001-315-104	01K00227	NR01A001	G0165018	FILTER
01D1003-005 001	866-06262001-315-105	01K00228	NR01A001	G0165018	FILTER
01D1003-006 001	867-06262001-315-101	01K00229	NR01A001	G0165018	FILTER
01D1003-007 001	867-06262001-315-102	01K00230	NR01A001	G0165018	FILTER
01D1003-008 001	867-06262001-315-103	01K00231	NR01A001	G0165018	FILTER
01D1003-009 001	867-06262001-315-104	01K00232	NR01A001	G0165018	FILTER
01D1003-010 001	867-06262001-315-105	01K00233	NR01A001	G0165018	FILTER
01D1003-011 001	867-06262001-315-106	01K00234	NR01A001	G0165018	FILTER
01D1003-012 001	867-06262001-315-107	01K00235	NR01A001	G0165018	FILTER
01D1003-013 001	867-06262001-315-108	01K00236	NR01A001	G0165018	FILTER
01D1003-014 001	867-06262001-315-109	01K00237	NR01A001	G0165018	FILTER
01D1003-015 001	867-06262001-315-110	01K00238	NR01A001	G0165018	FILTER
01D1003-016 001	868-06262001-315-101	01K00239	NR01A001	G0165018	FILTER
01D1003-017 001	868-06262001-315-102	01K00240	NR01A001	G0165018	FILTER
01D1003-018 001	868-06262001-315-103	01K00241	NR01A001	G0165018	FILTER
01D1003-019 001	868-06262001-315-104	01K00242	NR01A001	G0165018	FILTER
01D1003-020 001	868-06262001-315-105	01K00243	NR01A001	G0165018	FILTER
01D1003-021 001	868-06262001-315-106	01K00244	NR01A001	G0165018	FILTER

I certify that this electronic image, and all hardcopies produced from this image, accurately represents the data and is in compliance with the RFETS specific requirements, both technically and for completeness, other than the conditions detailed above or in the sample data package narrative Release, by submission through email, the data contained in this electronic image and the computer-readable EDD (as applicable), has been authorized by the laboratory Manager or the Manager's designee







### Cover Page

The Delivery and receipt of this Data Deliverable constitutes an invoice for payment for this Data Deliverable

Name Jason Kim Title Chemist Date 07/10/01





### Case Narrative Page

Report Identification Number

01K-0007

Subcontract Number

KH010066

Name of Industrial Hygienist

D Babbs

Laboratory Identification Number

DCHM

01D1003

Purchase Order/Charge Code

EED50120

General Set Information. There are twenty-one field samples in this batch of RIN # 01D1003 The samples were analyzed for beryllium in wipe. No problems were encountered with receipt of these samples and no contact with the CTR was required

<u>Method Summary</u>: Samples were transferred to digestion vessels, and spiked with a 10 mL aliquot of 1 1 Nitric Acid Samples were digested in microwave with pre-set program. After completion of digestion, samples were diluted to 25mL volume with ASTM Type II Water Samples were shaken well and settled at least for 2 hours before the analysis Samples were analyzed in a Flame Atomic Absorption Spectrometer A clean representative portion of the digestate is aspirated and atomized in a flame. A light beam from a hollow cathode lamp is directed through the flame into a monochromator, and onto a detector that measures the amount of absorbed light Measurement is integrated with instrument software and recorded

Sample Preparation: All samples were prepared in accordance with DCL SOP, IH-AN-001 and modified NIOSH method NMAM 7300 for microwave digestion

**Holding Times:** The holding times were met for both sample preparation and analysis

Limit of Detection and Required Detection Limit. Limit of Detection (LOD) is 0 047 µg/sample for this modified NIOSH method NMAM 7300 which is determined from Method Detection Limit (MDL) study, and Required Detection Limit (RDL) is 0.10 µg/sample for this contract of the analysis

**Instrument Calibration:** Instrument calibration was performed in accordance with published procedures of NIOSH method NMAM 7300

Initial and Continuing Calibration Verification Analysis: Recoveries for the analyte in all Initial Calibration Verification (ICV) and Continuing Calibration Verification (CCV) samples are within the quality control limits of ± 10%

Initial and Continuing Calibration Blank Analysis: No analyte was found in any Initial Calibration Blank (ICB) or Continuing Calibration Blank (CCB) at levels above the absolute value of the RDL

Media Blank Analysis. Results of Media Blanks are between the LOD of 0 047 μg/sample and the RDL of 0 10 μg/sample



DataChem Laboratories, Inc 960 West Levoy Drive Salt Lake City 11tah 84123-2547 Phone (801) 266-7700

Web Page www datachem com E-mail lab@datachem com

FAX (801) 268-9992



### Case Narrative Page

**Dilution(s):** None were required

<u>Laboratory Control Sample and Duplicate Analysis:</u> Laboratory Control Samples (LCS) and Laboratory Control Sample Duplicates (LCSD) were prepared and analyzed Results for the analyte in the LCS's are within the control limits of  $\pm 20\%$  The Relative Percent Differences (RPD) between LCS and LCSD are within the control limits of 0% to 20%

<u>Replicate Analysis:</u> Replicate analysis was made from two field samples. One replicate's RPD between the sample and the replicate are within the control limits of 0% to 20%. The other replicate analysis is negligible because the results of the samples and its replicates are below the RDL.

Flagging Codes: U - Analyte is not detected above the LOD of 0 047 µg/sample B - Analyte result is between the LOD of 0 047 µg/sample and the RDL of 0 10 µg/sample

Nonconformance/Corrective Action Report (NC/CAR) None were required

<u>Sample Calculation:</u> The final results are calculated by the following equations Final result for aqueous samples ( $\mu$ g/sample) = (A) x (B) x (C)

### Where

A = Analyte concentration from instrument determination ( $\mu g/mL$ )

B = Concentration factor from sample preparation

= Final Volume of Digestate (mL)

Sample

C = Dilution performed at time of analysis

Example Calculation  $(1 \mu g/L) \times (0.025 L/sample) \times (1) = 0.025 \mu g/sample$ 



### Report Page

Report Identification Number

01K-0007

Subcontract Number

KH010066

Name of Industrial Hygienist

D Babbs

Laboratory Identification Number

**DCHM** 

RIN

01D1003

Purchase Order/Charge Code

EED50120

	Laboratory		
	Sample	Beryllıun	1
Customer Sample Number	Number	μg/W1pe	
866-06262001-315-101	01K00224	0 18	
866-06262001-315-102	01K00225	0 11	
866-06262001-315-103	01K00226	0 25	
866-06262001-315-104	01K00227	0 11	
866-06262001-315-105	01K00228	0 079	В
867-06262001-315-101	01K00229	0 056	В
867-06262001-315-102	01K00230	0 074	В
867-06262001-315-103	01K00231	0 10	U
867-06262001-315-104	01K00232	0 10	U
867-06262001-315-105	01K00233	0 082	В
867-06262001-315-106	01K00234	0 061	В
867-06262001-315-107	01K00235	0 10	U
867-06262001-315-108	01K00236	0 10	U
867-06262001-315-109	01K00237	0 10	U
867-06262001-315-110	01K00238	0 10	U
868-06262001-315-101	01K00239	0 10	U
868-06262001-315-102	01K00240	0 10	U
868-06262001-315-103	01K00241	0 10	U
868-06262001-315-104	01K00242	0 050	В
868-06262001-315-105	01K00243	0 10	U
868-06262001-315-106	01K00244	0 10	U
Limit of D	etection (LOD)	0 0	47
Required Detection	on Limit (RDL)	0	10

U - Parameter not detected above LOD

B - Parameter between LOD and RDL





### QC Summary Page

Report Identification Number

01K-0007

Subcontract Number

KH010066

Name of Industrial Hygienist

D Babbs

Laboratory Identification Number

**DCHM** 

Laboratory Identification Ivui

01D1003

Purchase Order/Charge Code

EED50120

### Batch ID

QC Sample ID	Sample Description	Analyte	Units	Result	Target	Percent Recovery	Relative Percent Difference
BL-185955-1	Media Blank	Beryllium	μg/Wipe	0 051	NA	NA	NA
QC-185955-1	LCS	Beryllıum	μg/W1pe	23 7	25	94 9	NA
QD-185955-1	LCSD	Beryllium	μg/Wipe	23 6	25	94 3	0 59
BL-185955-2	Media Blank	Beryllıum	μg/Wipe	0 072	NA	NA	NA
QC-185955-2	LCS	Beryllıum	μg/Wipe	24 2	25	96 7	NA
QD-185955-2	LCSD	Beryllıum	μg/W1pe	24 5	25	97 9	12

LCS - Laboratory Control Sample

LCSD - Laboratory Control Sample Duplicate

NA - Not Applicable

ND - Parameter not detected above LOD

Percent Recovery = (Result / Target) \* 100 0

Relative Percent Difference = ((|LCS - LCSD|) / ((LCS + LCSD)/2 0)) \* 100 0





### **COC** Page

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST   CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST   CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST   CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST   CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST   CHAIN OF CUSTODY   CHAIN	### Advanced  ##				
Comment   Comm	### (unmerdate)  15.48.  16.48	F CUSTODY/SAI	MPLE ANALYSIS REQUES		1003#001
Common   C	### Characters   Customer   Customer   Customer   Customer   Marx   Date   Time   Sec06262001   FILTER   Col.   7 00 A   315-104   Sec06262001   FILTER   Col.   7 00 A   315-105   FILTER   Col.   7 00 A   315-105   FILTER   Col.   7 00 A   315-101   FILTER   FILTER   7 00 A   315-101   FILTER   7 00 A   315-101   FILTER   FILTER   7 00 A   315-101   FILTER   FILTER   7 00 A   315-101   F			Page	Jo
State   Stat		t/Requester NSEN, SHELLY	Telephone No. 640]		
Inchest   Inch	ESAMPLE HAZARDSREMARKS  ESAMPLE HAZARDSREMARKS  ESAMPLE HAZARDSREMARKS  **  Customer Matrix Date Time  Number Matrix Date Time  Number Matrix Date Time  Number Matrix Date Time  315-102  315-102  315-104  315-104  315-104  315-104  315-104  315-104  315-104  315-104  315-107  315-1	ng Origin	Purchase Ord EED50120	er/Charge Code	
SABLAKAS   Part Laboratories, Inc.   Reference of Sablace   Part Laboratories, Inc.   Reference of Sablace   Reference of Comment   Ref	DataChem Laboratories, Inc  ESAMPLE HAZARDS/REMARKS  reserved samples DOT hazardous per 40 CFR Part 136 3 Table II?  **  Cousioner Manux Date Time Number Time Number Numb	ok No.	Ice Chest No	Temp	
SEARLE HAZANDS/REVARIOS   Particle   Parti	### Cast Chem Laboratories, Inc reserved samples DOT hazardous per 40 CFR Part 136 3 Table II? **  **  **  **  **  **  **  **  **  **	d of Shipment	Bill of Lading	Air Bil No	
SCREENING   SPECAL INSTRUCTIONS Hold Time   Recurred by set   Preservative   Pr	SOSIBLE SAMPLE HAZARDS/REMARKS           re acid persecved samples DOT hazardous per 40 CFR Part 136 3 Table II? YES ort(S)           re other known hazardous substances present? YES ort(S)           re other known hazardous substances present? YES ort(S)           11D 1003-         B66-06262001         FILTER         06/26/7         7 00 AM           11D 1003-         B66-06262001         FILTER         06/26/7         7 00 AM           11D 1003-         B66-06262001         FILTER         06/26/7         7 00 AM           10D 003-         B67-06262001         FILTER         06/26/7         7 00 AM           10D 1003-         B67-06262001         FILTER         06/26/7         7 00 AM           10D 003-         B67-06262001         FILTER         06/26/7         7 00 AM	GRAL EXPRESS d COC (if any)	4555 212/ PRE	200	
Commercy   Commercy   Semple Analysis   EdS    Preservance	### ### ###  Bodie No Customer Matrix Date Time L  Bodie No Customer Matrix Date Time L  1D1003- 866-06262001 FILTER 06/26/ 7 00 AM  101D1003- 866-06262001 FILTER 06/26/ 7 00 AM  101D1003- 866-06262001 FILTER 06/26/ 7 00 AM  101D1003- 866-06262001 FILTER 06/26/ 7 00 AM  105/5 001 315-104 2001  105/5 001 315-104 2001  106/5 001 315-104 2001  107/0 107			line	
Casconer	Customer   Matrix   Date   Time				
156-06282001   FILTER   06726   700 AM   866   1-FILTER I VM   NR01A001 (Beryllium Filter Analysis) [5dS]   25   None   151-02   2001	- 866-06262001 FILTER 06/26/ - 866-06262001 FILTER 06/26/ - 866-06262001 FILTER 06/26/ - 866-06262001 FILTER 06/26/ - 866-06262001 FILTER 06/26/ - 866-06262001 FILTER 06/26/ - 866-06262001 FILTER 06/26/ - 866-06262001 FILTER 06/26/ - 866-06262001 FILTER 06/26/ - 315-105 - 867-06262001 FILTER 06/26/ - 315-101 - 867-06262001 FILTER 06/26/ - 315-101 - 867-06262001 FILTER 06/26/ - 315-101 - 2001			laly 315	Preservative Packing
115   101   102	315 101 2001  - 866-06262001 FILTER 06/26/ 315-103  - 866-06262001 FILTER 06/26/ 315-104 2001  - 866-06262001 FILTER 06/26/ 315-104 60/26/ 315-105  - 866-06262001 FILTER 06/26/ 315-105  - 867-06262001 FILTER 06/26/ 315-101 Date/Time Received By  CLAL 7/5/C/ (500)		$\vdash$		NA:
15-102   16-102   16-102   17-00 AM   866   1-FILTER / NA   NRO1A001 (Beryllium Filter Analysis) [5dS]   25   None   15-102   15-102   17-00 AM   866   1-FILTER / NA   NRO1A001 (Beryllium Filter Analysis) [5dS]   22   None   15-102   15-102   17-00 AM   866   1-FILTER / NA   NRO1A001 (Beryllium Filter Analysis) [5dS]   25   None   15-102   15-103   1	1315-102  1315-102  1315-102  1315-102  1315-103  1315-104  1315-104  1315-104  1315-104  1315-104  1315-105  1315-105  1315-105  1315-105  1315-105  1315-105  1315-105  1315-107  1315-			OKOOZZY	None
15-103   1	15-103   FILTER 06/26/201   FILTER 06/26/2001   FILTER 06/26/200				N/A None
Second   Filter   Second   Filtre   Second   F	866-06262001 FILTER 06/28/ 315-104 315-104 315-105 315-105 315-105 315-101 315-101 315-101 315-101 315-101 315-101 315-101 315-101 315-102 315-103 315				N/A None
15-104   17-11-ER   10-12-04   10-12-04	186-0222001   FILTER 06/26/   315-105   FILTER 06/26/   315-105   FILTER 06/26/   315-101   FILTER 06/26/   315-102   FILTER 06/26/   315-102   Date/Time Received By		+		N/A
156-06262001   FILTER   0628   700 AM   867   1-FILTER   NM   NR01A001 (Beryllium Filter Analysis) [5dS]   28   None	1966-06262001   FILTER 0628/ 2001   195-105   2001   315-101   2001   315-101   2001				None
150-105   150-	315-105 315-101  - 867-06262001  FILTER 06/28/ 2001  315-102  315-102  Date/Time Received By  CLUL 7/5/C/ (500)				N/A None
S67-06262001	867-06262001 FILTER 06/26/   315-101   FILTER 06/26/   315-102   FILTER 06/26/   315-102   Date/Time Received By			+	2101
Se7-06262001	1315 102 FILTER 06/26/ 315 102 Date/Time Received By Court 7/5/C/ (500 FPC)				N/A None
d By         DateTime         Received By         DateTime         Received By         DateTime         Received By         DateTime	15/C 1500				N/A None
Date/Time Received By Date/Time Relinquished By Date/Time Relinquished By Date/Time Received By Date/Time Rece	23   27	Date/Time	ž)		,=
Date/Time Recerved By Date/Time Retinquished By Date/Time Retinquished By Date/Time Recerved By Date/Time Date/Time Date/Time Date/Time	() Date/lime	Date/Time		ĭ	Date/Time
Date/Time Received By Date/Time Reinquished By Date/Time Received By Talinguished By Date/Time Received By Date/Time Date/Time Date/Time Date/Time Date/Time	DateTime	+			Date/Time
Disposed Machinel to material disposed of per lab procedure used to analytical process) Disposed By	Date/Time	+-			Date/Time
	Personal Method (p. 9	cedure used in analytical process)	Disposed By	Date/Time	



### **COC** Page

Secretary   Land   Comment   Comme	o modore	Advanced		{	) NA VI	ar > ar	IV/SAMPI	E ANALYSIS REOUEST	110 01E	01D1003#001
Commont   Comm	Sciences, In	, e	·	נ	HAIIV	Jr costor			1 1	Jo
Comment   Comm				3	ntact/Reque	itor		Telephone No		
SET-ORGEOGOUT   FILTER   COCK   Time   LONGAN   LIFLITER   MM   NROTAGOT (Beryllum Filter Analysis) [5d5]   37   MA   MROTAGOT (Beryllum Filter Analysis) [5d5]   32   MA   MROTAGOT (Beryllum Filter Analysis) [5d5]   32   MA   MROTAGOT (Beryllum Filter Analysis) [5d5]   33   MROTAGOT (Beryllum Filter Analysis) [5d5]	01D1003			_	JOHNSEN	SHELLY	Container			Preservative
151-107   151-	Bottle No	Number	Matrix	Date	Time	Location	(size/type/quantity)			¥N
Sit-104   Sit-	1	867-06262001 315-103	FILTER		7 00 AM	867	1 FILIEK / NA //			None
SET-GESEZOOT   FILTER   2001   7.00 AM   867   1 FILTER / NM   NRO1A001 (Beryllum Filter Analysis) [5GS]   355   None   15F1.05   355   None   315-105   355	١,	867-06262001 315-104	FILTER	2001	7 00 AM	867	1 FILTER / N/A			
151-106   151-	1.	867-06262001 315-105	FILTER	06/26/	7 00 AM	867	1 FILTER / N/A			
15-107   1	1.	867-06262001 315-106	FILTER	06/26/ 2001	7 00 AM	867	1 FILTER / N/A	NR01A001 (Beryllium Filter Analysis) [50		
FILTER   FILTER   170 AM   867   1 FILTER   1 MR   1 FILTER   1	1	867-06262001 315-107	FILTER	06 <b>/2</b> 6/ 2001	7 00 AM	867	1-FILTER / N/A			None
515-109   FILTER   2001   700 AM   867   1 FILTER   NN   NR01A001 (Beryllium Filter Analysis) [5dS]   37 NN   NR01A001 (Beryllium Filter	01D1003- 013 001	867-06262001 315-108	FILTER	06/26/ 2001	7 00 AM	867	1 FILTER / NJ		-	None
Seg-OSC22001   FILTER   OSC26   700 AM   Seg   1 FILTER   NNA   NRO1A001 (Beryllium Filter Analysis) [5dS]   Sep   NNA   Seg   1 FILTER   NNA   NR01A001 (Beryllium Filter Analysis) [5dS]   Seg   NNA   Seg   N	1.	867-06262001 315-109	FILTER	2001	7 00 AM	867	1 FILTER / NJ		-	None
S86-06262001	01D1003- 015 001	867-06262001 315-110	FILTER	06/26/ 2001	7 00 AM	867	1 FILTER / N//			
115-102	01D1003- 016 001	868-06262001 315-101	FILTER	06/26/ 2001	7 00 AM	898	1 FILTER / NV			
1-FILTER   NA   NR01A001 (Beryllium Filter Analysis) [5dS]   4  NA   NR01A001 (Beryllium Filter Analysis) [5dS]   4  NA   NA   NA   NR01A001 (Beryllium Filter Analysis) [5dS]   4  NA   NA   NA   NA   NA   NA   NA	01D1003-	868-06262001 315-102	FILTER	06/26/ 2001	7 00 AM	898	1 FILTER / NJ /1			None
By Date/Time Received By Date/Time Relinquished By Date/Time Received By Date/Time Recei	01D1003-	868-06262001 315-103	FILTER	06/26/ 2001	7:00 AM	898	1-FILTER / NV.		_	- 1
Date/Time Received By Date/Time Relinquished By Date/Time Relinquished By Date/Time Received By Date/Time Da	Reimquished By		Date/Time	Received				Date/Iune	Zot.	10/6
Date/Time   Received By Date/Time   Relinquished By Date/Time   Received By Date/Time   Received By Date/Time   Received By Date/Time   Received By Date/Time   Date/Time	Relinguished By	3	Date/Time	Received	<u></u>			DateTime	d By	
Date/Time Received By Date/Time Retinquished By Date/Time Received By Date/Time Received By Date/Time Received By Date/Time Received By Date/Time	Reinquished By		Date/Fime	Received	Å.		_	DateTime	A B,	ראנים זוווים
Disposal Method (e.g. returned to eustaner disposed of per lab procedure used in analytical process) Disposed By	Relinquished By		Date/Time	Received	9,4		_	DateTime	a Bv	Date/Time
	FINAL SAM	-	od (e.g. returned to c	ustomer disp	sosed of per lab	procedure used in analyti	ical process)	Disposed By	Date/Time	



### COC Page

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST   Tripe 3 of 3					, , , , , , , , , , , , , , , , , , ,				# 0 0 O	
Common	Commodore Advanced		Ď	HAIN (	OF CUSTOD	Y/SAMP	LE ANALYSIS R	EQUEST	010	1003#001
Common	ociences, and								- 1	5
Decimons   Name   Decimons   Cummons   Cummo	II.		<u>5</u>	ontact/Reque	stor SHELLY		Telephone   6401	Q.		
186-0625001   FILTER   GG269   700 AM   868   1 FILTER I VM   NRO1A001 (Beryllum Filter Analysis) [5d5]   V/A   None   186-0625001   FILTER   GG269   700 AM   868   1 FILTER I VM   NRO1A001 (Beryllum Filter Analysis) [5d5]   V/Y   None   186-0625001   FILTER   GG269   700 AM   868   1 FILTER I VM   NRO1A001 (Beryllum Filter Analysis) [5d5]   V/Y   None   186-0625001   FILTER   GG269   700 AM   868   1 FILTER I VM   NRO1A001 (Beryllum Filter Analysis) [5d5]   V/Y   None   186-0625001   FILTER   GG269   700 AM   868   1 FILTER I VM   NRO1A001 (Beryllum Filter Analysis) [5d5]   V/Y   None   700 AM	-	Matmx		Time	atron	Container (size/type/quanti	(6)	Sample Analysis		Preservative Packing
1864-0628201	1	FILTER	06/26/	7 00 AM		1 FILTER / N/	A NR01A001 (Berylliu	n Filter Analysis) [5dS]		NA
1   1   1   1   1   1   1   1   1   1	۱	FILTER	2001	7 00 AM		1-FILTER / N/	A NR01A001 (Berylliu	n Filter Analysis) [5dS]		N/A None
4 By Describe Received By Describe By Describe By Describe By Describe By Describe By Describe By Describe By Describe Received By Desc	الم	FILTER	2001	7 00 AM		1 FILTER / N	/A NR01A001 (Berylliu	m Filter Analysis) [5dS]		N/A None
Destruce Received By Destruce Received By Destruce Received By Destruce By Destruce By Destruce By Destruce Received By Destruce Received By Destruce Received By Destruce Received By Destruce Received By Destruce Destruce Received By Destruce Destruce By Destruce Destruce By Destruce By Destruce By Destruce Destruce By Destruc								*	1	
THE DESTINE Received By DESTINE Relationshed By DESTINE Received B										
The latest are secured by   Due Time   Received by   Due Time   Due										
Deserved By  Deser									· ·	
Descrime Received By  Descrime Received By						14,		\ \		
Describe Received By  Describe Received By					3					
190   Date/Time   Received By   Date/Time   Relinquished By   Date/Time   Received By   Date/Time   Date/Time   Received By   Date/Time   Received By   Date/Time   Received By   Date/Time   Date/Tim										
190   1900   Pate/Time   Received By   Date/Time   Relinquished By   Date/Time   Received By   Date/Time   Date/Time   Received By   Date/Time   Received By   Date/Time   Dat										
190   1900   Received By   Date/Time   Relinquished By   Date/Time   Received By   Date/Time   Date/Time   Received By   Date/Time   Received By   Date/Time   Date/Time   Received By   Date/Time   D							The second secon	1		
Date/Time Recerved By Date/Time Relinquished By Date/Time Recerved		1		12	Da		1			Date/Time
Date/Time         Received By         Date/Time         Relanquished By         Date/Time         Received By           Date/Time         Received By         Date/Time         Received By         Date/Time           Date/Time         Received By         Date/Time         Received By	3	-		H H m	ă					Date/Tune
Date/Time Received By Date/Time Relinquished By Date/Time Received By Date/Time Received By Date/Time Date/Time Date/Time Date/Time Date/Time Date/Time	Relinquished By:	DateTime	Received I	à	ā	_	quished By			Date/Time
Descent Marked for returned in mineraned of one jab procedure used in analytical process) Disposed By	Relinquished By	Date/Time	Received	By.	ă	_	quished By	_		Date/Time
	ETMAT CAMPITE Desired Me		ustomer dis	posed of per lab	procedure used in analytic	l process)	Disposed By		Date/Time	

Property

Waste

Sample XX

### RELEASE EVALUATION FORM Page 1 of 3

Page 1 of 3
Release Evaluation No 010605 T130C-004EXTENDED YES EXPIRES DECEMBER 31, 2001Charge No
PART I SENDER/CUSTODIAN ACKNOWLEDGMENT
Description of Property/Waste/Sample To Be Released/Transferred LAPEL AIR SAMPLES AND SWIPES
Current Location 444, 883 and 865 BUILDING COMPLEXES
Destination, DataChem Laboratories INC 960 West LeVoy Drive, Salt Lake City UTAH 84123
1
New Recipient/Custodian , DataChem Laboratories INC 960 West LeVoy Drive, Salt Lake City UTAH 84123
History/Process Knowledge THE AIR SAMPLES ARE TAKEN IN DUPLICATE, ONE OF WHICH WILL BE SURVEYED PER RSP 7 02 AND REPRESENT THE ACTIVITY OF THE ACTUAL SAMPLE THAT WILL BE SENT INDUSTRIAL HYGIENE WILL ENSURE THAT THE AIRFLOW OF THE DUPLICATE FILTER IS EQUAL TO OR GREATER THAN THE ACTUAL FILTER THAT IS TO BE SENT TO A OFF-SITE FACILITY THE SWIPES ACTIVITY WILL BE READ PER RSP 7 02
Has the specified material ever been in an RMMA/RBA/CA or contacted DOE controlled radioactive materials? UNKNOWN
By signing below, I certify information provided in Part I of this release evaluation to be true and accurate     By signing below, I agree to comply with the specific requirements noted in Part II of this release evaluation
Sender/ Date, 06/05/01 Ext 6727
(ind Complex RSFORMS-9.01-01

### PARTII

### RADIOLOGICAL ENGINEERING

### SPECIFIC REQUIREMENTS AND/OR COMMENTS

FACT (2 2 dpm/pci X 509 pci/gram x 0 15 grams/filter)= 167 97 dpm/filter to meet DEPLETED URANIUM IATA SHIPPING LIMITS

- 1 The Radiological Control Technician shall surface contamination survey of the duplicate air sample cassette and the duplicate air filter per RSP 7 02 All surveys shall be recorded for both loose surface contamination for both alpha and beta emitters -
- 2 ACCEPTANCE CRTIERIA FOR THE EXTERNAL PORTIONS OF THE LAPEL AIR SAMPLER SHALL NOT EXCEED 20 DPM/100cm2 (alpha) OR 1000 DPM/100cm2 (beta)
- 3 ACCEPTANCE CRITERIA FOR SWIPES TO BE SHIPPED SHALL NOT EXCEED 167 97 DPM/100cm2
- 4 ACCEPTANCE CRITERIA FOR THE DUPLICATE AIR FILTER SHALL NOT EXCEED 167 97 DPM PER FILTER
- 5 THE RCT SHALL PERFORM CONTAMINATION SURVEYS PER RSP 7 02 on the external of each shipping package ACCEPTANCE CRITERIA SHALL NOT EXCEED 20 DPM/100cm2 (ALPHA) OR 1000 dpm/100cm2 (beta)
- Beta surveys are not required if the facility has on record an Technical Basis Document exempting the need for Beta monitoring
- 6 The sender/custodian will provide all data to radiological engineering if any filter/swipe is above criteria listed in section above Radiological Engineering may SUM the complete shipment, if the shipment TOTAL ACTIVITY is below 472 NANOCURIES, BASED UPON DEPLETED URANIUM CONTAMINATE then the radiological engineer will sign the surveys annotating that material may be shipped
- The sender/custodian shall retain and make available to Radiological Engineering, the chain of custody and survey records for all sample shipped under the terms and conditions of the release evaluation. The sender custodian shall provide the shipper a copy of the survey and this Release Evaluation along with the samples being sent to the analytical laboratory. This release will meet the DOT (49 CFR) requirements of less than 2 nanocuries per gram 8 DATACHEM LABORATORIES, INC. OPERATED UNDER UTAH DEPARTMENT OF ENVIRONMENT QUALITY DIVISION OF RADIATION CONTROL RADIOACTIVE MATERIAL LICENSE UT 1800237 AMMENDMENT 10 THAT EXPIRES ON MAY 31, 2002
- 9 CASI will ensure that all requirements of this release evaluation have been satisfied prior to shipping
- 10 CASI will retain all P/WRE DATA PACKAGES FOR AUDITING PURPOSES
- 11 THIS MATERIAL IS BEING SHIPPED AS NON-RADIOACTIVE IN ACCORDANCE WITH IATA DANGEROUS GOODS REGULATIONS

Evaluat

Date 0/12/01 Ext 6385

The samples specified in Part 1 of this release evaluation are being provided with authorization for transport as non-radioactive materials in accordance with Department of Transportation (49 CFR) regulations This authorization for shipment does not constitute an unrestricted release

APPROVAL FOR TRANSFER/SHIPMENT

Approved

Date

4111

3191

SAMPLE RELEASE 010605-T130C-004

### PROPERTY/WASTE RELEASE EVALUATION SIGNATURE REQUIREMENTS

Page 3 of \_\_3\_\_

### Release Evaluation for Waste

A Release Evaluation for Waste requires an evaluation and unrestricted release approval signature. The evaluation signature is by the Radiological Engineer (RE) providing the methods or criteria for unrestricted release (i.e., survey requirements, analytical requirements, no survey required, etc.). The unrestricted release approval signature for a Release Evaluation for Waste shall be a RE authorized to provide unrestricted release approval. In addition, the evaluation and unrestricted release approval signatures shall not be the same RE. The intent of this provision is to provide peer review-of the evaluation and method of unrestricted release. It is important the RE take the peer review process seriously and not become a "rubber stamp" for their fellow engineer.

### Release Evaluation for Property:

A Release Evaluation for Property requires an evaluation and unrestricted release approval signature For a Release Evaluation for Property, the evaluation and unrestricted release signature may be the same RE In the past, only one signature was required for property for which a RE could provide an unrestricted release on the basis of process knowledge/history

### Release Evaluation for Samples:

Samples are any waste or material that is being shipped to an off-site facility for analysis. Samples that may be provided with an unrestricted release using process knowledge/history or standard contamination survey techniques may be authorized for shipment to an off-site facility using the signatory requirements specified for property. Samples which cannot be provided with an unrestricted release using process knowledge/history or standard contamination survey techniques shall be authorized for shipment from the Site using the methodology specified for waste, i.e., second signature being provided by a RE authorized to perform peer review and approval for shipment

The approval for transfer/shipment section of a Sample Release Evaluation (SRE) shall be revised as noted below for samples which cannot be provide with an unrestricted release

"The samples specified in Part 1 of this release evaluation are being provided with authorization for transport as non-radioactive materials in accordance with Department of Transportation (49 CFR) regulation This authorization for shipment does not constitute an unrestricted release"

### Additional Documentation.

Number of lines per section may be modified or additional pages attached to ensure adequate documentation of information necessary to perform release evaluation

Additional pages or attachments to a release evaluation shall have the evaluation number, Page \_\_ of \_\_, initials of Radiological Engineer signing approval for transfer/shipment and date

51

@RAH



				(					RS FO	RMS 07.	.02-01
		2020/07	70.00.00.5			27.50					
									ti 18 M., Al fil sil sili Sandania kalendaria		an attained
			IENT DAT		27/1		_				
	BERLINE	_Mfg	N/A	_Mfg	N/A		у Туре:		BETA CO	NTAMINAT	ION
Model _	SAC-4	_Model _	N/A	_Model _	N/A		_	66, 867 & 8			
Serial #	961	Serial #	N/A	_Serial #	N/A				IN EACH B		
Cal Due	11/1/01	_Cal Due	N/A	_Cal Due	N/A	A Purpo	se R	ELEASE E	Se SMEARS	TO LAB	
Bkg	05 cpmα	_Bkg	N/A cpma	_Bkg	N/A cp	mα:					
Efficiency	33 00 %	Efficiency	N/A %	Efficiency	N/A	% RWP	# <u>N/A</u>				
MDA	<b>20 dpmα</b>	MDA	N/A dpma	MDA	N/A do	mα					
						Date	4	7/2/01	Time	a 9	00
Mfg 'E	BERLINE	Mfg	N/A	Mfg	N/A	• _					
Model	BC-4	Model	N/A	Model	N/A	RC					
Serial #	868	Serial #	N/A	Serial #	N/A						
Cal Due	7/12/01	Cal Due	N/A	Cal Due	N/A						
Bkg	42 6 cpmβ	_	N/A cpmβ	Bkg	N/A opt		N	<b>I/A</b>	/ N	<sub>I/A</sub> /	N/A
	25 00 %			Efficiency	N/A	<del></del>					
MDA				MDA			Prin	i name	Sign	nature	Emp #
MD <sub>A</sub>	200 dpmβ	MDA	N/A dpma	MIDA	N/A dp	mp j				·	
- DDN/DEN	r#: 01060	S T120C 0	04			<u></u>					
Comment				_ DIT_220 AN	יום חו	STID VEV	או הוודפו	DE OF D	A C. STIOWE	D NO DI DI	(ZA TET)
Commence				I U-237 AI	יטעעו	SORVEI	JN OO 13	DE OF DA	AU SHOWE	DINOELE	YAIED
Comments: ISOTOPE OF CONCERN IS PU-239 AND DU SURVEY ON OUTSIDE OF BAG SHOWED NO ELEVATED  ACTIVITY ABOVE MDA											
SURVEY RESULTS											
							•				
						4	<u>ALPHA</u>			<b>BETA</b>	
Swipe		LO	CATION			Swipe	Direct	Wipe	Swipe	Direct	Wipe
#						dpm/100cm2	dpm/100cm2	dpm/wipe	dpm/100cm2	dpm/100cm2	dpm/wipe
1			52001-315-1			<20	N/A	N/A	<200	N/A	N/A
2			52001-315-1			<20	N/A	N/A	<200	N/A	N/A
3			2001-315-1			<20	N/A	N/A	<200	N/A	N/A
4			2001-315-1			<20	N/A	N/A	<200	N/A	N/A
5			2001-315-1			<20	N/A	N/A	<200	N/A	N/A
6 7			2001-315-1			<20 <20	N/A	N/A	<200	N/A	N/A
/		60/-U020	52001-315-1	UZ		<20	N/A	N/A	<b>&lt;</b> 200	N/A	N/A

### 867-06262001-315-102 <20 8 867-06262001-315-103 N/A N/A <200 N/A N/A N/A 9 867-06262001-315-104 <20 N/A <200 N/A N/A <20 10 867-06262001-315-105 N/A N/A <200 N/A N/A 11 867-06262001-315-106 <20 N/A N/A N/A <200 N/A 12 867-06262001-315-107 <20 N/A N/A <200 N/A N/A 13 867-06262001-315-108 <del>\</del>20 N/A N/A <200 N/A N/A 14 <20 867-06262001-315-109 N/A N/A <200 N/A N/A 15 867-06262001-315-110 <20 N/A N/A <200 N/A N/A 16 868-06262001-315-101 <20 N/A N/A <200 N/A N/A 17 868-06262001-315-102 <20 N/A N/A N/A <200 N/A N/A 868-06262001-315-103 <20 N/A 18 N/A N/A <200 19 868-06262001-315-104 <20 N/A N/A N/A N/A <200 N/A 20 868-06262001-315-105 N/A N/A

Date Reviewed //3/0/

RS Supervision

Page 1 of 2

Emp #

Signature

### COPY

			10/01/10	(1):076	17. Y////		
ethalaise se saint little ann a co		RVEY RESULTS	<u> </u>			o en Mariatica de la Arricana.	in de de de la composition de la composition de la composition de la composition de la composition de la compo
		<b>*</b>	ALPHA			<u>BETA</u>	
Swipe	LOCATION	Swipe	Direct	Wipe	Swipe	Direct	Wipe
#		dpm/100cm2	dpm/100cm2	dpm/wipe	dpm/100cm2	dpm/100cm2	dpm/wip
21	868-06262001-315-106	<20	N/A	N/A	<200	N/A	N/A
22	N/A	N/A	N/A	N/A_	N/A	N/A	N/A
23	N/A	N/A	N/A	N/A	N/A	N/A	N/A
24	N/A	N/A	N/A	N/A	N/A	N/A	N/A
• 25	N/A	' N/A	N/A	N/A	N/A	N/A	N/A
26	N/A	N/A	N/A	N/A	N/A	N/A	N/A
27	N/A	N/A	N/A	N/A	N/A	N/A	N/A
28	N/A	N/A	N/A	N/A	N/A	N/A	N/A
29	N/A	N/A	N/A	N/A	N/A	N/A	N/A
30	N/A	N/A	N/A	N/A	N/A	N/A	N/A
31	N/A	N/A	N/A	N/A	N/A	N/A	N/A
32	N/A	N/A	N/A	N/A	N/A	N/A	N/A
33	N/A	N/A	N/A	N/A	N/A	N/A	N/A
34	N/A	N/A	N/A	N/A	N/A	N/A	N/A
35	N/A	N/A	N/A	N/A	N/A	N/A	N/A
36	N/A	N/A	N/A	N/A	N/A	N/A	N/A
37	N/A	N/A	N/A	N/A	N/A	N/A	N/A
38	N/A	N/A	N/A	N/A	N/A	N/A	N/A
39	N/A	N/A	N/A	N/A	N/A	N/A	N/A
40	N/A	N/A	N/A	N/A	N/A	N/A	N/A
41	N/A	N/A	N/A	N/A	N/A	N/A	N/A
42	N/A	N/A	N/A	N/A	N/A	N/A	N/A N/A
43	N/A	N/A	N/A	N/A	N/A	N/A N/A	N/A
44	N/A	N/A	N/A	N/A	N/A	N/A N/A	N/A
45	N/A	N/A	N/A	N/A	N/A	N/A N/A	N/A
46	N/A	N/A	N/A	N/A	N/A N/A	N/A N/A	N/A
47	N/A	N/A	N/A	N/A	N/A N/A	N/A	N/A
48	N/A	N/A	N/A N/A	N/A N/A	N/A	N/A	N/A
49	N/A	N/A					N/A
50	N/A	N/A	N/A	N/A	N/A N/A	N/A N/A	N/A
51	N/A	N/A	N/A	N/A	N/A N/A	N/A N/A	N/A
52	N/A	N/A	N/A N/A	N/A	N/A N/A	N/A N/A	N/A
53	N/A	N/A	N/A N/A	N/A N/A	N/A N/A	N/A N/A	N/A
54	N/A	N/A	N/A N/A	N/A N/A	N/A N/A	N/A N/A	N/A
55	N/A	N/A	N/A N/A	N/A N/A	N/A N/A	N/A N/A	N/A
56	N/A	N/A N/A	N/A N/A	N/A N/A	N/A N/A	N/A	N/A
57	N/A		N/A N/A	N/A N/A	N/A	N/A N/A	N/A
58	N/A N/A	N/A N/A	N/A N/A	N/A N/A	N/A N/A	N/A	N/A
	N/A	AWL	AW				
59		NT/A	NT/A	NJ/A	NT/A !	N/A	NJ/A
60	N/A	N/A	N/A	N/A	N/A	N/A	N/A
		N/A N/A N/A	N/A N/A N/A	N/A N/A N/A	N/A N/A N/A	N/A N/A N/A	N/A N/A N/A



RFP F 3791.32 (7/95) Formerly RF-47530

京の日子 こで 中北 八

Rocky Flats Environmental Technology Site

はないないないところでは、 からないという はっちんかいこととなっている

Golden, CO 80402-0464

(12/603 Safety and Hygiene Chain of Custody Record and Analysis Request

/of 2 Number Time/Date Time/Date Fime/Date Time/Date Date: 7 /2 /2001 Page ☐ Unbroke REMARKS Received by Received by Blue - Originator ☐ Broken ftion of Seal: (Release #) 15,613,00 Comments: Signature: THINK BIRDJEXT: FLS ..... Personal Bulk Area Relinquished by Relinquished by Relinquished by Relinquished by MEDIA Asbestos Samples SAMPLE PLEST. TIME/ 101ET | 113/01 Time/Date Time/Date Time/Date Fime/Date VOLUME IHIS Title: ANALYZE FOR 144 CA333 Received by Received by Received by Receive Dy x 4713 vences KI ä Name of Originator: ), 643.35 Report and Billing Instruction 12-1621 Real 315-110 866 - 6126201 - 215- 163 811-1126201-35-K1 216-11212001-315-144 **/erbal To:** ax To: ø Relinquished by Relinquished by SAMPLE NUMBER Bldg/Y/M/D/P#/S# Relinquished by SEA STATE Relinquished by -[12/2mg **Caiser-Hill** 

RFP F 3791.32 (7/95) Formerly RF-47530

# Rocky Flats Environmental Technology Site

Golden, CO 80402-0464

Safety and Hygiene Chain of Custody Record and Analysis Request

2 of 2 Number Time/Date Time/Date Time/Date Time/Date ☐ Unbroken una ple to ve 47/4Date: 7/2/20 REMARKS Received by Received by Received by Received by Condition of Seal: Seat# (Release #) NROINCL Comments: Signature: Bldg/Ext: 71174/x Persońal Area BUIK Relinquished by Reflection by Relinquished by Relinquished by ⋖ Industrial Hygiene Sample MEDIA Analysis Request SAMPLE TIME/ Time/Date Time/Date Time/Date Time/Date VOLUME Title: ZHES liters **28**14 ANALYZE FOR Received by Received by Received by Received by · Name of Originator: () Report and Bulling Instruction -4212001-315-161 26-04262111-315-102 Perbai To: -01212601-315-1 ex To: Relinquished by Relinquished by SAMPLE NUMBER Bldg/Y/M/D/P#/S# Relinquished by Relinquished by

### RCRA/CERCLA Constituents Data Summary One Sample Location: Room 145 Engineered, Concrete Trough Sample Media: Oil

Sample Number	Sample Analyses	Result (ug/L)
		TOT BILL A Man then menulatory limite
0150083-002 001	TCLP VOAs	ICLF VOASTIESS Mail Tegulatory minus
		TOT D CV/O As less than requilatory limits
0150083-007 001	TCLP SVOAs	ICLF 3 V CAS ICSS undan I v guidant y munica
100 700 000010		The state of the s
0180083-002 001	TCLP Metals	I CLP Metals less than regulatory milities
100 000000		

### Metals Analyzed

Analyte	Regulatory limit (mg/L)
Arsenic (D004)	5.0
Barrum (D005)	100 0
Cadmium (D006)	1 0
Chromium (D007)	5.0
Lead (D008)	5.0
Mercury (D009)	0.2
Selenum (D010)	1 0
Silver (D011)	5.0



See table on next page

## Volatile Organics Analyzed

Analyte	Regulatory limit (mg/L)
Vinyl Chloride (D043)	0.2
1,1-Dichloroethene (D029)	0.7
Chloroform (D022)	0.9
1,2- Dichloroethane (D028)	0.5
2-Butanone (D035)	200 0
Carbon Tetrachloride (D019)	0.5
Trichloroethene (D040)	0.5
Benzene (D018)	0.5
Tetrachlorobenzene (D039)	0.7
Chlorobenzene (D021)	100 0
1,4- Dichlorobenzene (D027)	7.5

PCB Data Summary
One Sample Location: Room 145 Engineered, Concrete Trough
Sample Media: Oil

Results* (ug/L)	Not Detected
Congener	All PCB Congeners
Sample Number	01S0083-001 001





KAISER\*IIILL company ANALYTICA! SERVICES DIVISION · Mandeled

### FAX COVER SHEET FOR FINAL DATA PACKAGE REPORTS

RIN NUM	BER: 0150083 PCM
FROM:	SKIP NIELSEN
PHONE:	(303) 966-4289
FAX:	(303) 966-8345
то:	M. SHaffer
FAX:	6678
PHONE:	
NUMBER	OF PAGES, INCLUDING COVER SHEET:
Diama a a a a a	44
Please con	if the fax is not received in its entirety.  (phone number)

### NOTE:

This facismile contains the results, in the Final Sample Data Package, for the analytes requested in this RIN. The package has been scheduled for verification or validation. Until verification or validation is completed the results must be considered preliminary. You will be forwarded a copy of the verification or validation report shortly after it is received by ASD. You should examine this report to determine if any qualifiers (flags) have been attached to the results Plagged data may or may not be suitable for use as originally intended and should be evaluated for acceptability before use. If you have any questions please contact your Analytical Services Project Lead, do no contact the laboratory directly.

01S0083#002				75542			Preservative, Presting	None 4 degrees C	None 4 degrees C	None 4 degs C withs	None 4 degs C w/zhs	None 4 degs C w/zhs	None 4 degs C wizhs	None 4 degs C wizhs	DateTime	ButeTirre	Date/Time	Drefine	
CO C.#		Charge Code	Temp	5458 2127 5542		¥	83	Routine] c	Routine}	30) [Routine]	SSD&C011 (TCLP Semi VOA 1311/8270B) [Routine]	toukne]	(outine)	toutine]	Received By	Received By	Received By	Received By	DateTing
S REQUEST	Telephone No 4375/4289	Purchase Order/Charge Code EED50(20	Ice Chest No.	BE of Lading Air Bill No	PRE	INCTIONS Hold Time	Sumple Analysis	SS03B002 (PCB/Pest CLP-Solid) [Routine]	SS08C006 (TCLP Metals 1311) [Routine]	SS08C010 (TCLP VOA 1311/8260) [Routine]	LP Semi VOA 13	SS01B005 (VOA 8260-Water) [Routine]	SS01B005 (VOA 8280-Water) [Routine]	SS01B005 (VOA 8280-Water) [Routine]	DateTime	DateFire	Date Tirre	Diveliae	
CUSTODY/SAMPLE ANALYSIS REQUEST				Tom	100 \$	G SPECIAL INSTRUCTIONS D			SS08C006 (TC	SS08C010 (TC	SSDBC011 (TC	SS01B005 (VO	SS01B005 (VO	SS01B005 (VO	hed By-	sted By	rhed By:	shed By	Disposed By
Y/SAMPL	N SKIP	BENCIL	Stor 1/401		1 40	SCREENING REQUIRED	Container (standy)	125-NL / AG /1	125-ML/G/I	60-ML / G /1	125-ML / AG /1	40-ML/G/1	40-ML/G/f	40-ML / G /1	Dections Reinquaded By	Date Time Refired by	Date/J.me Reimpunshed By	Date Time Relaqueshed By 9.00	oess)
_	att/Requester		Loghook No. 99 C.	1 -	Related COC (if any) O. J		Location	BLDG, 865 RM 145 FLOOR TRENCH	BLDG 865 RM 145 FLOOR TRENCH	BLDG. 865 RM 145 FLOOR TRENCH	BLDG, 865 RM, 145 FLOOR TRENCH	BLDG 865 RM 145 FLOOR TRENCH	BLDG 865 RM. 145 FLOOR TRENCH	BLDG 865 RM 145 FLOOR TRENCH	C.D. Descrime	- E	D	10-62-9	19 1
CKAIN OF	(Surcodate)	S			Rel	Table II? YES	Time	1,0812	0826	8150	1180	2115		>	7		150 EX	A PA	A sed yo pascoder
						Part 136.3 NO	å	1/22/			->	422/01	1		1 - 1-	1 2 7	1 3	30	o aretemer
<b>59</b> 3			;	osted in 1.22.	80	MARKS Has per 40 CFR Esent? YES or	Mænx	SOLID	SOLID	SOLID	SOLID	AQUEOUS	AQUEOUS	AQUEOUS	DetoTime /	J 1	Date Time	DecTina (-29-0) 9100	d (c.g. retumed
Commodore Advance Sciences					00 92 XX	E HAZARDS uple DOT las dous substant	Customer	DICELEON				Oladesos		-	////	还	1	May C	1-1
Сопптодот	Sample	P. 0150687	i٤	70 (4m) of	Protocol CA	POSSIBLE SAM Are acid preserves Are other known:	Boute No	0150083-	001 003	01 50083-	01.005	01S0083- X 002.001	0150083-	01 S0083-	Responded By	Reimquaked By	Relationship By	Relinquisted By	PIKAL SAMPLE DISPOSITION

6

NG-01-5001 MED 01:31 BM 200BCE ONE V2D



### **Analytical Report**

Client: K-11 RIN#01S0083

LVL#: 0106L204

W.O.#. 11830-001-001-9999-00

Date Received: 06-29-01

### PESTICIDE/PCB

One (1) water sample was collected on 06-27-01

The sample was extracted on 07-03-01 and analyzed according to criteria set forth in the Contract Luboratory Program 3/90 (OLM3.1) SOW for PCB target compounds on 07-13,24-01

The following is a summary of the QC results accompanying the sample results and a description of any problems encountered during their analyses

- 1 Linearity and breakdown criteria were met for each of the analytical columns
- 2. Retention time criteria were met for all compounds on both analytical columns.
- 3 Resolution of all pesticides in the Resolution Check Standard were within EPA QC limits
- 4 The RPDs of the pesticides in the Individual Mixes analyzed for calibration verification were within 25% for both analytical columns
- 5 The RPDs of the pesticides in the Performance Evaluation Mixes analyzed for calibration verification were within 25% for both analytical columns
- 6 recoveries were market advisory LPA OC limits Surrogate recoveries are summarized on the Form 2 included in the data package.
- 7 spike recoveries was the EPA QC limits.
- 8 ratics were limits Matrix spike recoveries are summarized on the Form 3 included in the data package A copy of the Sample Discrepancy Report (SDR) has been enclosed
- 9 Recoveries of pesticides for the Florisil Cartridge Check were within EPA OC limits

The could presented in this report retine only to the analytical testing and conditions of the samples at recept and during storage. All pages of this report are integral parts of the analytical data. Therefore, this report should only be reproduced in its entirety of

As of January 27, 2001, Recra Labnet Philadelphia became Lionville Laboratory Incorporated Some forms may still reference Recra Labnet Philadelphia

Jain Daniels

Deputy Laboratory Manager Lionville Laboratory Incorporated

pelly haroning grandbenty pep

7/27/01 Date



Lionville Laboratory, Inc.

Work Order 11830-001-001-9999-00 CLP Low Concentration Client K-H RIN#01S0083

13

Page

Report Date 07/25/01 15.05

	Cast ID.	Cust ID. 0180083-001	01S0083-001 002	01S0083-001.	РВСКЭТ	РВЦКЈО ВЅ	
Sample	RFWH.	100		OOT MSD	OIL	01LE0790~MB1	
Information	Matrix	WATER		WATER		MATER	
	D F	00 1		7 00		1 00	
	Units	T/SD	7C/L	ng/r	1/90	1/50	
Alpha-BHC		1.0 U	1 0 U	5 0 U		0.050 U	
Beta-BHC		100	1.0 U	500	0.050 U	0 050 3	
Delta-BHC		1.0 U	10 U	5 0 U	0-050 U	0.050 U	
gamma-BHC (Lindane)		10 U	36 × \$	42 + %	0.050 U	96 \$2	
Heptachlor		1.0 U	22 + %	22 * \$P		84 %P	
Aldrin		1 0 T	12 * %	16 * %P		78 %P	
Heptachlor epoxide		10 U	100	0 0 5	0 050 U		
Endosulfan I		ποτ -	10 U	5.0 U	D 050 0	0 050 U	
Dieldrin		200	8 * \$P	33 * &P	0 10 U	4 411	
4,4'-DDE		2 0 U	20 0	10 U	0.10 U		
Zndrin		200	32 *	* 0 <del>*</del>	0 10 U	134 * \$	
Endosulfan II		2 0 U	2 0 U	10 U	0.10		
4,4'-DDD		20 0	2 0 U	10 U	0 10 U		
Endosulfan sulfare		2 G U	2 0 U	10 U	C 01 0		
4,4'-DDT		2 0 7	* * * * * * * * * * * * * * * * * * * *	% + 6T	0.10 U	96 %P	
Methoxychlor		10 U	10 ft	50 U	0 50 t		
Endrin ketone		2.0 0	2 0 U	10 U	0 10 U	0 10 U	
Endrin aldehyde		2.0 U	2 0 U	10 U	U 07 0	0 10 0	
alpha-Chlordane		υ 0.τ	1.0 U	5.0 C	0 020 O	0.050 U	
gamma-Cnlordane		TO T	100	S 0 U	0 050 U	D 050 0	
Toxaphene		100 Ω	100 U	500 U	5 0 C	5 0 U	
Aroclor-1016		20 €	20 U	100 U	1 0 U	1.0 0	
Aroclor-1221		40 U	40 U	200 3	200	2 0 U	
Aroclor-1232		20 0	20 U	700 U	D 0 T	10 0	
Aroclor-1242		20 U	20 U	100 C	10 4	ז ט מ	
Arocior-1248		20 U	20 J	200 U	1.0 U	1.0 U	
Aroclor-1254		20 U	20 U	100 U	1 0 1	D 0 1	
Aroclor-1260		20 C	20 3	100 U	1.c U	1.0 U	

NS= Not spiked \*= Outside of Advisory limits Us Analyzed, not detected J= Present below detection limit. B= Present in blank NR= Not requested %= Percent recovery. D= Diluted out. I= Interference 34= Not Applicable P= Difference petreen columns exceeds 25%.

AUG-01-2001 WED 01:38 PM SOURCE ONE ASD

RFW Batch Number 0106L204

CLP SUMMARY

4C

### ORGANICS METHOD BLANK SUMMARY

CLIENT SAMPLE NO

Lab Name Lionville Labs, Inc Contract: 1830-01-01

PBLKJU

('lient K-H RIN#0180083

Lab Sample ID 01650790-MH1

Lab File ID <u>07120107.35</u>

Matrix (soil/water) WATER

Extraction (SepF/Cont/Sonc) CONT

Sulfur Cleanup (Y/N) N

Date Extracted 07/10/01

Date Analyzed (1) 07/13/01

Date Analyzed (2), 07/13/01

Time Analyzed (1) 1355

Time Analyzed (2) 1355

Instrument ID (1) 07

Instrument ID (2) 08

GC Column (1) DR608 ID: 0.53 (mm)

GC Column (2) 1701 ID: 0.53 (mm)

THIS METHOD RLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD:

	CLIENT	LAB	DATE	DATE
	SAMPLE NO		ANALYZED 1	ANALYZED 2
	*************************************	にこれのは世界はしゅうといか	#725=5-555	
01	0180083-001	0106L204-001	07/13/01	07/13/01
02	0190083-001	0106L204-001\$	07/13/01	07/13/01
03	0180083-001	D106L204-001T	07/13/01	07/13/01
04	PBLKJUBS	01LE0790-MB1S	07/24/01	07/24/01
Ì				

COMMENTS

page 1 of 1

FORM IV ORG

3/90

FAX NO\_303 966 8345

### 1D ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO

0180083-001.002

Lab Name. Lionville Labs. Inc Work Order 11830-001-001-9999-00

Client K-H RIN#Olsoos3

Matrix (soil/water) WATER Lab Sample ID. 0106L204-001

Lab File ID 07120107.32 Sample wt/vol \_50\_0 (g/mL) ML

06/29/01 \* Moisture decanted (Y/N) \_ Date Received

Extraction (SepF/Cont/Sonc) CONT Date Extracted 07/10/01

Concentrated Extract Volume \_\_\_10000(uL) Date Analyzed: 07/13/01

Dilution Factor 1.00 Injection Volume 0.5(uL)

GUC Cleanup (Y/N) N Sulfur Cleanup (Y/N) N рH <u>70</u>

CONCENTRATION CAS NO COMPOUND UNITS UG/L 319-84-6-----Alpha-BHC 1 0 319-85-7-----Beta-BHC 1 0 Ιυ 319-86-8------Delta-BHC 1 0 ט 58-89 9-----gamma-BHC (Lindane) 1,0 U 76-44-8------Heptachlor\_ 1 0 ΙU 309-00-2-----Aldrin 1 0 17 1024-57-3-----Heptachlor epoxido\_ 1 0 U 959-98-8-----Endosulfan I\_\_\_\_\_ 1 0 U 60-57-1------Dieldrin 2 0 U 72-55-9------4,4'-DDE 2 0 U 72-20-8-----Endrin 2 0 טו 33213-65-9----Endosulfan II 2 0 ITT 72-54-8-----4,4'-DDD 2 0 עו 1031-07-8----Endosulfan sulfate 2 0 U 50-29-3-----4,4'-DDT 2 0 ľU 72-43-5-----Methoxychlor 10 ĺŪ 53494-70-5----Endrin ketone 2 0 U 7421-93-4-----Endrin aldehyde\_ 2 0 ซ 5103-71-9----alpha-Chlordane\_\_\_\_ 1 0 ľU 5103-74-2----gamma-Chlordane 1 0 U 8001-35-2----Toxaphone 100 117 12674-11-2-----Aroclor-1016\_ 20 U 11104-28-2----Aroclor-1221 40 U 11141-16-5-----Aroclor-1232\_ 20 U 53469-21-9---- Aroclor-1242 20 U 12672-29-6-----Aroclor-1248 20 ĺΰ

seem to las

FORM 1 ORG

11097-69-1----Aroclor-1254

11096-82-5-----Aroclor-1260

V4 3

lσ

טו

20





### FAX COVER SHEET FOR FINAL DATA PACKAGE REPORTS

RIN NUM	BER: 0/5008 3	TCLP VOG
FROM:	SKIP NIELSEN	
PHONE:	(303) 966-4289	
FAX:	(303) 966-8345	
TO:	M Schafre	
FAX:	6628	
PHONE:		
NUMBER	OF PAGES, INCLUDING COVER SHEET:	
Please con	tact if the fax is not received (phone number)	in its entirety.
	(DHOHE HAMDEL)	

### NOTE:

This facsimile contains the results, in the Final Sample Data Package, for the analytes requested in this RIN. The package has been scheduled for verification or validation. Until verification or validation is completed the results must be considered preliminary. You will be forwarded a copy of the verification or validation report shortly after it is received by ASD. You should examine this report to determine if any qualifiers (flags) have been attached to the results. Flagged data may or may not be suitable for use as originally intended and should be evaluated for acceptability before use. If you have any questions please contact your Analytical Services. Project Lead, do no contact the laboratory directly





Chent · K-H RIN # 01S0083

LVL#: 01061.204

W.O. #: 11830-001-001-9999-00

**Date Received: 06-29-2001** 

### GC/MS VOLATILE-TCLP

One (1) filtrate sample was generated on 07-09-2001 from a water sample collected on 06-27-2001

The sample and its associated QC samples were analyzed according to criteria set forth in Lionville Laboratory OPs based on SW 846 Method 8260B for TCLP Volatile target compounds on 07-13-2001

The following is a summary of the QC results accompanying these sample results and a description of any problems encountered during their analyses

- 1 I he cooler temperature upon receipt has been recorded on the chain-of-custody
- 2. The sample was analyzed within required holding time
- 3. The sample was analyzed at five-fold dilution due to the filtrate matrix
- 4. All surrogate recoveries were within EPA QC limits
- 5 All matrix spike recoveries were within EPA QC limits
- 6. All blank spike recoveries were within FPA QC limits
- 7 Internal standard area and retention time cuteria were met.
- Manual integrations are performed according to OP L-QA-125 to produce quality data with the utinost integrity. All manual integrations are required to be technically valid and properly documented. Appropriate technical flags are defined in the Glossary ("Technical Flags For Manual Integration")

President

Lionville Laboratory Incorporated

iom/styroup/data/wox/kb sin/0106/204 dkic

The results prescribed in this report relate only to the analytical testing and conditions of the sample, at receipt and during storage. All pages of this report are interval pasts of the analytical data. Therefore, this report already only be reproduced in the naturally of 9.1 pages.

Commodor	Commodore Advance Sciences	nces	ט	CKAIN OF	_	Y/SAMPLE	CUSTODY/SAMPLE ANALYSIS REQUEST		co.c.# 01S0083#002
14	BFETS /								Page 1 of 1
Sampler(s,				due)	scuRequester	EN. SKIP	Telephone No. 4375/4289	re No. 289	
141 C 0150683		10		33		TRENCH	Parchase Ord EED50120	Purchase Order/Charge Code EED50120	
Prois 111h	(111k) 11 861 FLOOR TRENCH commonised as a 55 pal (1247)	nverted as a 55 pai	(3(3))	1	Leghook Na. 99 S.	Ste0 1/410	Ice Chest No		Тепр.
- 12	Liouville Laboratory Inc	(nc		3	Method of Shipment		Pan) Bill of La	Bill of Lading / Al Bill No. 4538	2127 5542
Pretecul CA	00 gs st	03		2	Related COC (if stry)	ر ا	# 001 PRE		
POSSIBLE SAM	POSSIBLE SAMPLE HAZARDSREMARKS Are exal preserved samples DOT hazardous per 40 CFR Part 136 3 Table II? YES or NO	MARKS ous per 40 CFR Pa	n 1363 Tab	le II? YES		SCREENING REQUIRED	SPECIAL INSTRUCTIONS	Bold Time	
Are other known to the test	Are other known hazardnus substances present? YES of NO ** ** **	resent? YES or NC	•						
Bottle No.	Customer Number	Malox	Date	Time	Location	Cactanet (szekype/gaszkky)	lues	Sample Acalysis	Preservative
0150083-	SICCOL SON	gnos	1/23/	0812	BLDG 865 RM. 145 FLOOR TRENCH	125-ML/AG/1	SS03B002 (PCB/Pest CLP-Solid) [Routine]	Solid) [Routine] c	None 4 degrees C
0150083- 001 003		SOLD		0826	BLDG 865 RM, 145 FLOOR TRENCH	125-ML/G/I	SS08C006 (TCLP Metals 1311) [Rouline]	311) [Roulme]	None 4 degrees C
0150083- 001 004		SOLID		8150	BLDG 865 RM, 145 FLOOR TRENCH	60-ML/G/1	SS08C010 (TCLP VOA 1311/8260) [Routine]	11/8260) [Routine]	None 4 degs C w/2hs
01 S0083- 001 005		OTOS	<b>&gt;</b>	7814	BLDG, 885 RM 145 FLOOR TRENCH	1254 <b>/L</b> / AG / !	SS08C011 (TCLP Semi VOA 1311/8270B) [Routine]	JA 1311/82708) [Routi	ne] None 4 degs C w/zhs
0150083- 002.001	505,200	AQUEOUS	19/2/	2715	BLDG 865 RM 145 FLOOR TRENCH	40-N:L/G/1	SS018005 (VOA 8260-Water) [Routine]	ter) [Routine]	None 4 degs C w/zhs
0150083-		AQUEOUS			BLDG 865 RM 145 FLOOR TRENCH	40-ML/G/1	SS01B005 (VOA 8250-Water) [Routine]	ter) [Routine]	None 4 degs C wizhs
01S0083- -K 002.003		AQUEOUS	$\rightarrow$	<b>-</b>	BLDG 865 RM 145 FLOOR TRENCH	40-WE/G/1	SS01B005 (VOA 8260-Water) [Routine]	ter) [Routine]	None 4 degs Cwizins
Religiashed By	411.11.	Date/Time	Received By 7/50	4	REF#3	Aproline Resignished By O92S		Date True Perceved By	DateTere
Refirembed By	渔		Received By	Jours	127	Date/Time Relaquasted By		La eJime Received By	Diteline
Refigurated By	- 18	2017 John 1500	D. P.	12 Ex	Ž	Detecting Relinguated By		Dake Lane Received By	Date Time
Reungraped By	Ex 6.	6-19-01 9100	Received By Cales	Round	6-39-01 9.	Owestine Relaquished By 9.00		Dals Turk Americal By	DaleTine
FINAL SAMPLE DISPOSITION		Disposal Method (e.g., returned in outsmes; desposed of per 🗳 procedure,	тиет, фарти	d of per 16 ps	rocelue, used m analyncal process)	cress)	Disposed By		Date/Tune

R

WAG-01-S001 MED 01:40 BW SOURCE ONE ASD

Lionville Laboratory, Inc.

Þ

Report Date 07/17/01 22-29 Mork Order 11830001001 Page: Volatiles by GC/MS, TCLP Leachate K-H RIN#01S0083 Client

	11	_		9/0	9/0	%	-£1==	<b>1</b> 2	Þ	þ	Þ	Þ	Þ	ກ	Þ	D	ເວ	5	D	D	
LCHBLK	011,TV030-LB1 WATER	5.00	ng/L	101	95	96	*#=######	50	25	25	25	50	25	25	25	25	25	25	25	25	
	<b>7B1</b>	90	د.	4/0	o/e	₩	==±11,	₩	<i>a\</i> *	q/a	ሎ	η'n	₩	4∕9	4/0	40	q/a	נט	æ	D	
VBLKGG BS	01LVN144-MB1 WATER	Ħ	1/6n	100	96	95		93	106	103	76	123	104	103	102	86	100	5	93	5	
	<b>B</b> 1	0	. 7	9,0	ψ	∾	:=£];	Þ	Þ	Þ	ח	D	D	b	כו	b	ם	D	ם	D	
VBLKGG	OLLVN144~NB1 WATER	1 0	I/6n	105	98	103	]=====================================	10	S	S	S	10	īΩ	Ŋ	ιΩ	īŪ	ហ	ΓJ	73	ιV	
31.	rΛ	00	.1	10	₩	<b>.</b> \0	==£1;	=/0	<u>.</u> \o	40	۰۷	ℴ∖ℙ	৵	٧.	Υo	ΒĄO	Ν'n	D	=/0	5	
01S0083-001.	006 MS WATER	S	ղ/նո	100	93	102		90	86	101	106	141	103	106	104	102	101	25	06	25	
	10	00	. 1	%	o/a	مز	== £1;	Þ	p	D	D	D	D	D	D	Ö	ä	Þ	Þ	n	
8 6	006 Nater	S	1/6n	103	95	100	]	50	_ 25	_ 25	25	50	25	25	25	25	25	25	25	25	
Cust ID: 0180	RFW#:	D.F .	Units	Toluene-d8	e Bromofluorobenzene	1,2-Dichloroethane-d4		loride	1,1-Dichloroethene	rm	1,2-Dichlorcethane	ne	Carbon Tetrachloride	эесьепе		Tetrachloroechene	степе	1,3-Dichlorobenzene	1,4-Dichlorobenzene	1,2-Dichloroberzese	*= Cutside of EPA CL2 QC limits
	Sample Information				Surrogate	Recovery		Vinyl Chloride	1,1-Dichl	Chloroform	1,2-Dichl	2-Butanone	Carbon Te	Trichloroethene	Benzene	Tetrachlo	Chlorobenzene_	1,3-Dichl	1,4-Dichl	1,2-Dichl	*= Gutsid

RFW Batch Jumber: 0106L204

### 4Α VOLATILE METHOD BLANK SUMMARY

Lab Name : Lionville Laboratory Inc Contract: 11830-001-001-9999-00

Lab Code LVLI Case No . SAS No

SDG No · 06L204

Lab File ID, N071304

Lab Sample ID 01LVN144-MB1

Date Analyzed 07/13/1

Time Analyzed

1146

Matrix (soil/water) WATER

Level.(low/med) LOW

Instrument ID 5972N

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD

1	EPA	LAB	LAB	TIME
	SAMPLE NO	SAMPLE ID	FILE ID	ANALYZED
				PERSON
01	VBLKGGBS	01LVN144-MB1S	N071303	1109
02	LCHBLK	01LTV030-LB1	N071311	1634
03	0150083-001.004	0106L204-006	N071312	1711
04	01S0083-001 004MS	0106L204-006S	N071313	1749
05				7,15
06				
07	7 10		***************************************	
08				
09	***************************************			
10				***
11		~~~~		
12			*	
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				
26				
27				
28	11 47 44			
29				
30				

COMMENTS

page 1 of 1

FORM IV VOA

MAC-SW846MP-

	1 <b>h</b>		
VOLATILE	ORGANICS	ANALYSIS	SHEET

COMPOUND

EPA SAMPLE NO 0150083-001 004

Jab Name <u>Lionville Labs, Inc.</u> Contract	11830001001
Tab Code <u>Lionvi</u> Case No	9AS No: SDG No
Matrix (soil/water) WATFR	Lab Sample ID 01061/204-006
Sample wt/vol 5.00 (g/mL) ML	Lab File ID <u>n071312</u>
Level (low/med) LOW	Date Received 06/29/01
% Moisture, not dec	Date Analyzed 07/13/01
G=1 (=== -/===) G>D	Dilution Eactor: 5 00

Column (pack/cap) <u>CAP</u>

CAS NO

CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L

	ļ	ļ
75-01-4Vinyl Chloride	50	ט
75-35-41,1-Dichloroethene	25	[ט
67-G6-3Chloroform	25	טן
107-06-21,2-Dichloroethane	25	Įΰ
78-93-32-Butanone	50	ן ט
56-23-5Carbon Tetrachloride	25	ַטן
79-01-6Trichloroethene	25	ַט
71-43-2Benzene		ַט
127-18-4Tetrachloroethene	25	Ū
108-90-7Chlorobenzenc	25	ַט
541-73-11,3-Dichlorobenzene	25	ប
106-46-71,4-Dichlorobenzene		ju
95-50-11,2-Dichlorobenzeno	25	U

FORM 1 V-1

1/87 Rev



COMPANY
ANALYTICAL SERVICES DIVISION



#### FAX COVER SHEET FOR FINAL DATA PACKAGE REPORTS

RIN NUMI	BER: 010083 1ccp.	VO
FROM:	SKIP NIELSEN	
PHONE:	(303) 966-4289	
FAX:	(303) 966-8345	
TO;	M Shafer	
FAX:	6878	
PHONE:		
NUMBER	OF PAGES, INCLUDING COVER SHEET:	
Please cont	tact if the fax is not received in its entirety.  (phone number)	

#### NOTE:

This factimile contains the results, in the Final Sample Data Package, for the analytes requested in this RIN. The package has been scheduled for verification or validation. Until verification or validation is completed the results must be considered preliminary. You will be forwarded a copy of the verification or validation report shortly after it is received by ASD. You should examine this report to determine if any qualifiers (flags) have been attached to the results. Flagged data may or may not be suitable for use as originally intended and should be evaluated for accuptability before use. If you have any questions please contact your Analytical Services Project Lead, do no contact the laboratory directly



Client: K-H RIN # 01S0083

RFW#: 0106L204

W.O. #: 11830-001-001-9999-00

Date Received: 06-29-2001

#### SEMIVOLATILE

One (1) filtrate sample was generated on 07-09-2001 from a flammable liquid sample collected on 06-27-2001

The sample and its associated QC samples were extracted on 07-11-2001 and analyzed according to criteria set forth in I ionville Laboratory OPs based on SW 846 Method 8270C for TCLP Semivolatile target compounds on 07-18-2001

The following is a summary of the QC results accompanying the sample results and a description of any problems encountered during their analyses

- The cooler temperature upon receipt has been recorded on the chain-of-custody,
- 2. The sample was extracted and analyzed within required holding times
- The sample was extracted at 8-fold dilution due to limited sample volume and required an additional 2-fold dilution prior to analysis due to high levels of non-target compounds.
- 4 All surrogate recoveries were within LPA QC limits
- 5 All blank spike recoveries were within LPA QC limits
- 6 Internal standard area and retention time criteria were met
- Manual integrations are performed according to OP L-QA-125 to produce quality data with the utmost integrity. All manual integrations are required to be technically valid and properly documented. Appropriate technical flags are defined in the Glossary ("Technical flags For Manual Integration")

Michael 19
Provident

Lionville Laboratory Incorporated

som/group/data/bas/k-h tar 0106(204 doc

The results presented in this report relate only to the analytical testing and conditions of the samples at receipt and during storage. All pages of this report are integral parts of the analytical data. Therefore, this report should only be reproduced in its entirety of 1 0 6 pages.

Leachate Report Date 07/19/C1 15.35 Work Order 11830001001 Page: 1a Semivolatiles by GC/MS, TCLP Leachate Client K-H RIN#0150083 Lionville Laboratory, Inc.

RFW Batch Number 01061204	0106L204	Client K-H	K-H RIN#0150083	MON	Work Order 11830001001	001001	Page: _a
	Cust ID	Cust ID 0180083-001.	SBLKCA	SBLKCA BS	SBLKCA BSD	LCHBLK	
Sample Information	RFW# Matrix: D.P Units:	005 007 WATER 2.00 MG/L	01120821-MBI KATER 1.00 MG/L	01LE0821-MB1 WATER 1.00 MG/L	011E0821-MB1 WATER 1.00 MG/L	Olltroso-lbi Mater 1 00 MG/L	
	N. Probenzene-d5	68	77 %	63 %	200	4. 4.	
Surrogate	2-Fluorobiphenyl	68 %	љ 69	<b>%</b> 09	% · %	16 e	
Recovery	p-Terphenyl-d14	8.	06	74 %	φ 4 m u	61	
	Phenol-d5	61	4 4 4	e er		49 4	
	2-Fluoropheno	ָרָה אָר	9 6	* *	74 %	57. 24.	
2,4	2,4,6-Tribromophenoi	\$ KC	(3-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1		[]====================================	[]====================================	[]=====================================
	化苯甲基苯甲基苯甲基苯甲基苯甲基苯甲甲基苯甲甲基苯甲甲甲甲甲甲甲甲甲甲甲甲甲甲	1	Ω 010.0	65 %	% 9°	0.050 U	
Pyridine		0 15 0	0 010 U	51 %	50 %	0.050 U	
1,4-Dichiological	cente	0.15 U	0.010 0	61 %	% 99	0.050 G	
Z-Metny1phellol	nrl obeno!	0.15 U	0 010 U	61 %	99	0.050 U	
3- and/or 4-Methy pinchot	ly aprilement	0.15 U	0.010 U	20	48	0 020 0	
HEXACITOTOEL VALVE		0 15 U	0 010 U	61 %	<b>6</b> 8	0 050 O	
Wall Occupant	gue	0 15 C	0.010 U	10.	51	C 050 J	
Nexacilionobucación	Spano.	0 15 U	0 010 O	64 3	73 %	0.050 U	
L'A'OLITECHTOLOGICA L'A'DILLECHTOLOGICA L'EURANDAION (L'EURANDE L'EURANDE L'	okenal	0 38 J	0 025 U	67 %	74 %	0 12 D	
2 4 Din trotolife	919	0,15 U	0.C10 D	63	<b>89</b>	0.050 0	
2, 4 - Dillict Occurred.		0 15 U		2 29	74 %	0.050 U	
Pentachlorophenol	0]	0.38 U	0 025 U	27 %	54	0 12 U	
*= Ourside of Bi	r= Outside of bra cut to trustes:						

#### 4B SEMIVOLATILE METHOD BLANK SUMMARY

Lab Name: Lionville Labs, Inc.

Contract <u>1830-01-01</u>

Case No K-H RIN#0150083

Lab File ID. <u>D071811</u>

Lab Sample ID 01LR0821-MB1

Date Fxtracted: 07/11/01

Extraction (SepF/Cont/Sonc) CONT

Dare Analyzed 07/18/01

Time Analyzed 1529

Matrix: (Soil/Water) WATER

Level (low/med) IOW

Instrument ID 5972d

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD.

	CLIENT	LAB	I,AB	DATE
	SAMPLE NO.	SAMPLE ID	FILE ID	ANALYZED
	<b>发现不可用的 / 有用的名数以下不比二二。 " 电</b> 型	年1. 中午中午下 _ 三年中午二	-========	
01	SBLKCALE0821-MB1 BS	01LE0821-MB1S	D071812	07/18/01
02	SBLKCALE0821-MB1 BSD	OllE0821-MBIT	D071813	07/18/01
03	LCHBLK	01LTr080~LB1	D071814	07/18/01
04	0180083-001 005	0106L204-007	D071815	07/18/01
		j i		

COMMENTS .

18 SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO. 0150083-001 005

Lab Name · Lionville Labs, Inc. Work Order 11830001001

Client K-H RIN#0190083

Matrix (sol)/water) WATER

Lab Sample ID: 0106L204-007

(g/mL) <u>ML</u> Lab File ID D071815 Sample wt/vol· 130

Date Received 06/29/01 Level (low/med) <u>LOW</u>

% Moisture \_\_\_\_ decanted. (Y/N)\_\_ Date Extracted 07/11/01

Date Analyzed 07/18/01 Concentrated Extract Volume 1000(uL)

Dilution Factor: 2.00 Injection Volume, 2.0 (uL)

6.0 GPC Cleanup, (Y/N) N pH .

> CONCENTRATION UNITS. CAS NO COMPOUND (ug/L or ug/Kg) MG/L

Q 0 15 U 110-86-1-----Pyridine\_

0 15 U 106-46-7----1,4-Dichlorobenzene\_ 95-48-7----2-Methylphenol\_ 0 15 U 106-44-5----3- and/or 4-Methylphenol 0 15 U 0.15 U 67-72-1------Hexachloroethane 98-95-3-----Nitrobenzene 0 15 U 87-68-3-----Hexachlorobutadirne 0.15 0 0 15 U 88-06-2----2,4,6-Trichlorophenol 95-95-4-----2,4,5-Trichlorophenol\_ 0.38 0

121-14-2----2,4-Dinitrotolucne\_ 0 15 0 0 15 0 118-74-1-----Hexachlorobenzene 87-86-5-----Pentachlorophenol\_ 0.38 [0

FORM 1 SV-1

RFW (v3 3)

## 5ARF 1D 5/29/2001 12:29:13 PM

# Skip NIELSON x 4289 Sampling and Analysis Request Form

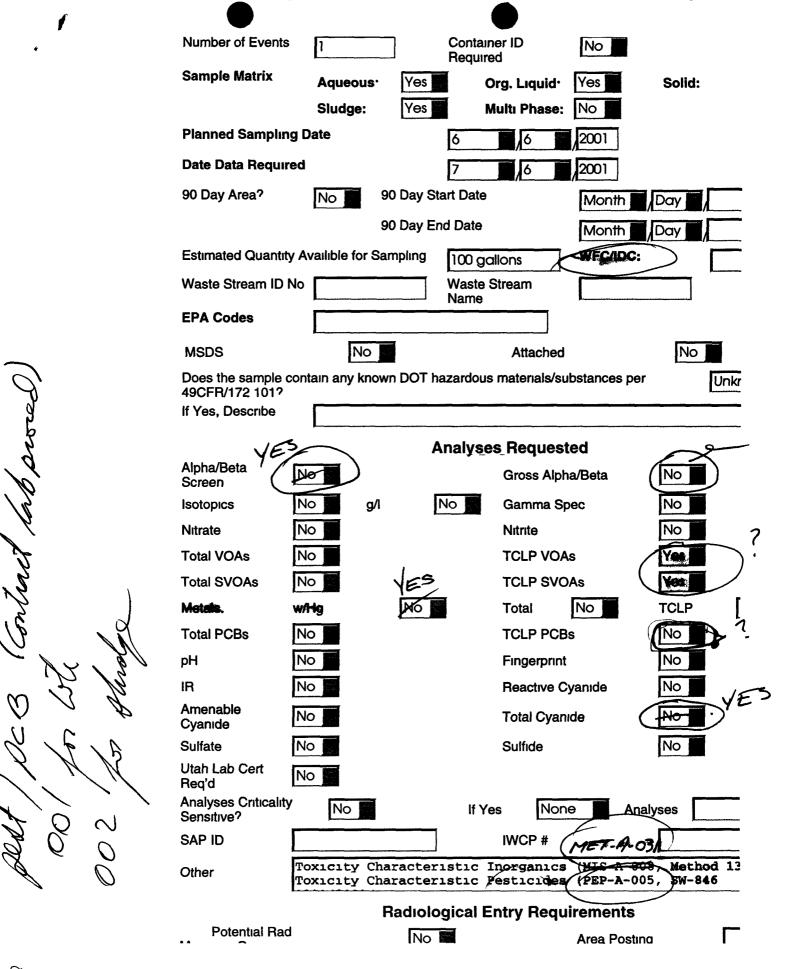
Sampling and Analysis Reques

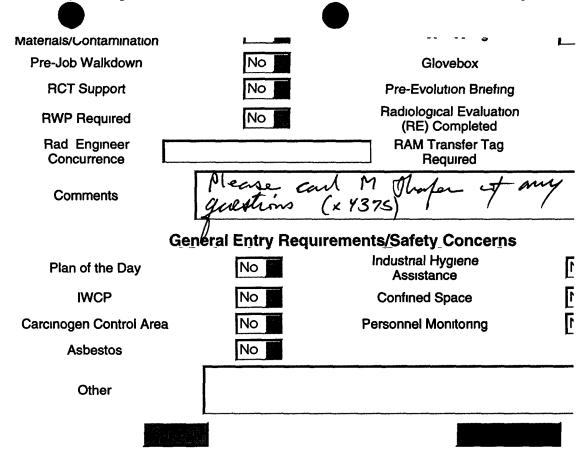
This form is best viewed at a screen resolution of 1024x768

Required fields are denoted by **Bold Red** labels

If you require a copy of this submission for your records, please note this to your Project Lead following your submission, and a PDF document will for you. Please help us save resources by not printing this form

View a sample SARF in RDF format Customer Information SARF ID 5/24/2001 1 32 42 PM EE050120 Project Charge No . Select a Charge Number **AST Project Code** Industrial and Site Services Project **AST Task Code** D&D Program Owner ID. D&D - Decon and Decomission Requestor: First Last Matthew Shafet Name<sup>\*</sup> Name Phone: Pager: 4375 Secondary Contact. First Last Duane Parsons Name Name Phone. Pager: 6458 3734 **Fax Data Results** First Last Matthew Shafer To Name Name Fax 2nd Fax· 6678 Sample Information Sample Location B865, rm 145 Sample Description One Sample Location, 2 liquid and 2 sludge samples and Identifiers



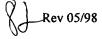


Property

Waste SampleXX

#### RELEASE EVALUATION FORM Page 1 of 3

Page 1 of 3
Release Evaluation No ·010604-T130C-001 EXTENDED yes EXPIRES 31 DEC 2001 Charge number NA SENDER/CUSTODIAN ACKNOWLEDGMENT
Description of Property/Waste/Sample To Be Released/ LIQUID AND SLUDGE SAMPLES SAMPLES FROM TRENCHES LOCATED IN BUILDING 865 RIN NUMBER 01S0083
Current Location SAMPLE LOCATION LISTED ABOVE IN DESCRIPTION OF PROPERTY SECTION
Destination LIONVILLE LABS, 208 WELSH POOL ROAD, LIONVILLE PENNSYLVANIA 19341-1225 Recipient/Custodian LIONVILLE LABS, 208 WELSH POOL ROAD, LIONVILLE PENNSYLVANIA 19341-1225
History/Process Knowledge THESE SAMPLES HAVE BEEN GENERATED TO CHARACTERIZE THE TRENCHES IN BUILDING 865
Has the specified material ever been in an RMMA/RBA/CA or contacted DOE controlled radioactive materials? YES
<ol> <li>By signing below, I certify information provided in Part I of this release evaluation to be true and accurate</li> <li>By signing below, I agree to comply with the specific requirements noted in Part II of this release evaluation</li> </ol>
Sender/Custodian Date 06/04/01 Ext 4375
RSFORMS-9.01-01



#### Page 2 of 3

#### PART II

#### RADIOLOGICAL ENGINEERING

#### SPECIFIC REQUIREMENTS AND/OR COMMENTS

- 1 The sender/custodian shall obtain a DOT RAD SCREEN for each sample (duplicate/REPLICATE sampling method)
  ACCPETANCE CRITERIA SHALL BE LESS THAN 2 NANOCURIES PER GRAM
- The RCT shall perform contamination surveys of the external portion of each sample container in accordance with RSP 7 02 The RCT shall provide the sender/custodian a copy of the survey ACCEPTANCE CRTIERIA SHALL BE LESS THAN 20 DPM/100CM2 (ALPHA) AND LESS THAN 1000 DPM/100CM2 (BETAO
- 3 The sender/custodian shall provide Radiological Engineering with a copy of the survey and lab data
- 4 LIONVILLE LABS, 208 WELSH POOL ROAD, LIONVILLE PENNSYLVANIA 19341-1225 OPERATES UNDER NRC RADIOACTIVE MATERIAL LICENSE 37-19378-01 THAT EXPIRES ON 30 APRIL 2001 AND IS NOW OPERATING UNDER NRC EXTENSION LETTER 129409 DATED MARCH 14, 2001
- 5 CASI SHALL RETAIN A COPY OF OF ALL DOCUMENTS REQUIRED BY THIS RELEASE EVALUATION AND MAKE AVAILABLE TO RADIOLOGICAL ENGINEERING A COPY OF THIS RELEASE EVALAUATION FOR AUDITING PURPOSES
- 6 THE SENDER/CUSTODIAN SHALL RETAIN A COPY OF THIS RELEASE EVALAUTION AS WELL AS SUPPORTING DOCUMENTS

The samples specified in Part 1 of this release evaluation are being provided with authorization for transport as non-radioactive materials in accordance with Department of Transportation (49 CFR) regulations. This authorization for shipment does not constitute an unrestricted release

Evaluated

APPROVAL FOR TRANSFER/SHIPMENT

Approv

Date 6.05.0/Ext 346/

SAMPLE RELEASE 010604-T130C-001

#### PROPERTY/WASTE RELEASE EVALUATION SIGNATURE REQUIREMENTS

Release Evaluation #: 010604-T130C-001 Page 3 of 3

#### Release Evaluation for Waste

A Release Evaluation for Waste requires an evaluation and unrestricted release approval signature. The evaluation signature is by the Radiological Engineer (RE) providing the methods or criteria for unrestricted release (i.e., survey requirements, analytical requirements, no survey required, etc.) The unrestricted release approval signature for a Release Evaluation for Waste shall be a RE authorized to provide unrestricted release approval. In addition, the evaluation and unrestricted release approval signatures shall not be the same RE. The intent of this provision is to provide peer review of the evaluation and method of unrestricted release. It is important the RE take the peer review process seriously and not become a "rubber stamp" for their fellow engineer.

#### Release Evaluation for Property:

A Release Evaluation for Property requires an evaluation and unrestricted release approval signature. For a Release Evaluation for Property, the evaluation and unrestricted release signature may be the same RE. In the past, only one signature was required for property for which a RE could provide an unrestricted release on the basis of process knowledge/history.

#### Release Evaluation for Samples:

Samples are any waste or material that is being shipped to an off-site facility for analysis. Samples that may be provided with an unrestricted release using process knowledge/history or standard contamination survey techniques may be authorized for shipment to an off-site facility using the signatory requirements specified for property. Samples which cannot be provided with an unrestricted release using process knowledge/history or standard contamination survey techniques shall be authorized for shipment from the Site using the methodology specified for waste, i.e., second signature being provided by a RE authorized to perform peer review and approval for shipment

The approval for transfer/shipment section of a Sample Release Evaluation (SRE) shall be revised as noted below for samples which cannot be provide with an unrestricted release

"The samples specified in Part 1 of this release evaluation are being provided with authorization for transport as non-radioactive materials in accordance with Department of Transportation (49 CFR) regulation This authorization for shipment does not constitute an unrestricted release"

#### Additional Documentation:

Number of lines per section may be modified or additional pages attached to ensure adequate documentation of information necessary to perform release evaluation

Additional pages or attachments to a release evaluation shall have the evaluation number, Page \_\_ of \_\_, initials of Radiological Engineer signing approval for transfer/shipment and date

8 ( Rev 05/98

@RAH

§ 261.24

Table 1. - Maximum Concentration of Contaminants for the Toxicity Characteristic

EPĀ	HW	Contaminant	CAS No. 2	Regulatory
No. 1				Level (mg/L)
D004		Assenic	7440-38-2	\$0 ×
D005		Barmon	7440-39-3	1000 -
D018		Benzene	71-43-2	0.5 •
D006		Cadminum	7440-43-9	10.
D019		Carbon tetrachionide	56-23-5	0.5
D020		Chlordane	57-74-9	0.03
D021		Chlorobenzene	108-90-7	100.0
D022		Chloroform	67-66-3	6.0 •
D007		Chronium	7440-47-3	500 ·
D023		o-Cresol	95-48-7	<sup>4</sup> 200.0
D024		m-Cresol	108-39-4	4 200.0 P
D025		p-Cresol	106-44-5	4 200.0
D026		Cresol	derdada	4 200.0 -
D016		2,4-D	94-75-7	A 10.0 "
D027		1,4-Dichlorobenzene	106-46-7	75mm
D028		1,2-Dichloroethane	107-06-2	0.5 -
D029		1,1-Dichloroethylene	75-35-4	07 -
D030		2,4-Dinstrotoluene	121-14-2	<sup>3</sup> 0.13 🖚
D012		Endrin	72-20-8	0.02
D031		Heptachlor (and its epoxide)	76 <del>-44-8</del>	0.008
D032		Hexachlorobenzene	118-74-1	³ 0.13 🕶
D033		Hexachlorobutadiene	87-68-3	-05 -
D034		Hexachloroethane	67-72-1	تب 30 س
D008		<b>Lead</b> o	7439-92-1	\$0,
D013		Lindane	<b>58-89-9</b>	0.4 •
D009		Merenty # +	<b>7439-97-</b> 6	0.2
D014		Methoxychlor	72-43-5	10.0 •
D035		Methyl ethyl ketone	78 <del>-93</del> -3	<b>200.0</b>
D036		Nitrobenzene	9 <del>8-95-</del> 3	2.0 🖛 🥫
D037		Pentachlorophenol	87-86-5	100.0
D038		Pyridine	110-86-1	<sup>3</sup> 5.0 ₩+
D010		Seicarum *	7782-49-2	1:0 * -
D011		Silver +	7440-22-4	50 ·
D039		Tetrachloroethylene	127-18-4	07 -
D015		Toxaphene	8001-35-2	0.5 •
D040		Trichloroethylene	79-01-6	0.5 -
D041		2,4,5-Trichlorophenol	95-95-4	400.0
D042		2,4,6-Trichlorophenol	88-06-2	<b>-2.0</b>
D017		2,4,5-TP (Silvex)	93-72-1	1.0
D043		Vinyl chloride	75-01-4	0.2

<sup>&</sup>lt;sup>1</sup> Hazardous waste number

<sup>&</sup>lt;sup>2</sup> Chemical abstracts service number

<sup>&</sup>lt;sup>3</sup> Quantitation limit is greater than the calculated regulatory level. The quantitation limit therefore becomes the regulatory level.

<sup>&</sup>lt;sup>4</sup> If o-, m-, and p-Cresol concentrations cannot be differentiated, the total cresol (D026) concentration is used.

6/4/01

## ANALYTICAL SERVICES DIVISION SAMPLING AND ANALYSIS REQUEST FORM

	ASD	use onl	Y	
RIN 0150083	Sampling TAT Provity	A	alysis TAT Routir	10
ASD Project Lead N	ielsen skip	Phone	4289	Pager 3444
Date. 06/01/2001	CUSTOME	R INFOR	RMATION	Owner ID- D&D
Project Charge No Requestor	EED90120 Project C	ode INDI	USTRIAL AND SI 4375	Task Code D&D PROGRAM Pager
Secondary Contact:	PARSONS, DUANE	Phone	6458	Pager: 3734
Fax Data Results To	SHAFER, MATTHEW	Fax.	6678	2nd Fax:
— Data Results 10	Graren, MATTHEW	F4Ki	90/0	ZIO PEX.
	Sample	INFORM	IATION	
Sample Location:	B865, RM 145			
Sample Description, identifiers, and Contain ID Numbers	ONE SAMPLE LOCATION; 2 ( SAMPLES	LIQUID AI	ND 2 \$LUDGE	Number of Events:
Sample Matrix:	Aqueous Org Liquid	] Solid	Sludge S	Multi Phase
Planned Sampling Date		Date [	Data Required	07/06/2001
•	No 90-Day Start Date		90-Day E	
Estimated Quantity Avail	· · · · · · · · · · · · · · · · · · ·	- He l		KNOWN
WSRIC ID	Waste Stream Name	•		Attached O Vac O
EPA Codes UNKNO	DWN any known DOT hazardous matena	MSDS	Yes (a) No	Attached. Yes © No
If Yes, Describe,	ent violen rot i ierrioons iusteis	B) <b>GUU</b> C Von	11000 POI 42011011/	2 101
100  50041501		es requ	TAAAAAA	Cikilos
Alpha/Beta Screen Gross Alpha/Beta Isotopics g/i Gamma Spec Nitrate Cyanide Reactiv Sulfide Sulfat	VOAs Total SVOAs Total SVOAs Total Metals' W Hg Total PCBs Total Nitrite Ve Amenable V Total	TCLI	P DH P DH P DH P DH P DH P DH P DH P DH	ticality Sensitive? Yes No
	RADIOLOGICAL	ENTRY E	EOUREMENTS	
RCT Support:  RWP Required	Contamination	o Iovebox. ra-Evoluti	Area Posting: on Briefing: RE Number	○ Yes ② No ○ Yes ③ No Tag Required, ② Yes ○ No
	LL M SHAFER WITH ANY QUESTI	ONS (X4:	<u> </u>	
	GENERAL ENTRY REQU	TREMEN	TS/SAFETY CONC	TRNS
Ta plan saltha pare	☐ Industrial Hygiene Ass		□ IMC	
Plan of the Day  Confined Space	Carcinogen Control Ar		=	- onnei Monitoring
Asbestos	- Anthioden committee			
Other				
Requestor Signature:				Date
,	- A. Dividina PPA Assess			
Note, For samples gon	ng to Building 559, excess sample	7 WTH 26 F	emined to <b>devois</b> t	UI .



Commodore Advanced	lvanced			HAIN	OF CUSTOD	V/SAMPL	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		01S0083#002
Sciences			•		•  -  -  -  -  -			Page	2 of 3
RIN 0150083			<u> </u>	Contact/Requester SHAPER, MATT / N	MATT / NIELSEN, SKIP	<u> </u>	Telephone No. 4375/4289		
Botte No.	Oustomer	Merrix	D E	Ting		Contrance (steety octon nativy)	Surple Asslyst	2	Protongre, Protong
0150083- 001 012		AQUEOUS			BLDG, 865 RM, 145 FLOOR TRENCH	40-ML/G/1	SS01B005 (VOA 8260-Water) [Routine]	[eunno	None 4 degs C wizhs
0150083- 001 013	A	AQUEOUS			BLDG. 865 RM. 145 FLOOR TRENCH	14.1611	SS05C021 (Total 846 Metals w/Hg RDL-3) [Routine]	g RDL-3) [Routine]	HNO3 4 degraes C
0150083-	ā	AQUEOUS			BLDG 465 RM 146 FLOOR TRENCH	14./AG/1	SS02B008 (Semi VOA 8270B) (Routine)	outine]	None 4 degs C w/zhs
0150083- 002 006	₹	AQUEOUS			BLDG, 865 RM 145 FLOOR TRENCH	1-L/AG/1	SS02B008 (Serm VOA 8270B) [Routine]	outine]	None 4 degs C w/zhs
0150083- 002.007	Q.	AQUEOUS			BLDG. 865 RM 145 FLOOR TRENCH	1-L/AG/1	SS02B008 (Semi VOA 8270B) [Routine]	outine]	None 4 degs C w/zhs
0150083- 002.008	A	AQUEOUS		     	BLDG, 865 RM, 145 FLOOR TRENCH	1-1.1611	SS03B001 (PC BCLP-Water) [Routline]	utine]	Nome 4 degrees C
0150083- 002 009	ov _	Aqueous			BLDG 865 RM. 145 FLOOR TRENCH	1+10N	SS03B001 (PC BCLP-Water) [Routine]	utine]	None 4 degrees C
01S0083- 002 010	SA.	AQUEOUS			BLDG. 865 RM. 146 FLOOR TRENCH	40-ML/G/1	SS01B005 (VOA 8260-Water) [Routme]	outme)	None 4 degs C w/zhs
01S0083- 002 011	A	AQUEDUS			BLDG, 865 RM, 146 FLOOR TRENCH	40-ML / GM	SS01B006 (VOA 8260-Water) [Routine]	outine)	None 4 degs C wizhs
0150083-	A	AQUEOUS			BLDG. 865 RM 145 FLOOR TRENCH	40-ML/G/1	SS01B005 (VOA 8260-Water) [Routme]	outne}	None 4 degs C w/zhs
0150083-	AG	AQUEOUS			BLDG. 865 RM 145 FLOOR TRENCH	11/6/1	SS05C021 (Total 846 Metals w/Hg RDL-3) [Routine]	g RDL-3) [Routine]	HNO3 4 degraes C
Xelinquebed By		Data/Time	Received By		Ā	terlino Beinquisted By	DeterTitue	Received By	Date/Time
Relinqueshed By		Date/Ilme	Received By		WQ	Drawline Refractished By	DESCENS	Restived By	Date/Time
Relinquished By		Dete/Time	Received By		ă	Date/Time Relinquished By:	рак-Ліво	Received By-	Date/Dine
Relinquished By		Date/Thise	Received By	<u></u>	ď	Delec'line Relinquished By	Date/fine	Received By	Date/Titue
FINAL SAMPLE	Disperal Method (e.g., returned to enaboner, disposed of yer ish procedure,	rapor permanen	former, dispe	sed of yer lab	b procedure, used in analytical process)	i process)	Depoted By	Date/Thus	

Commodore Advanced	need		<b>ଅ</b>	HAIN	OF CUSTOD	Y/SAMPL]	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		01S0083#002
Sciences									Page 3 of 3
RUN 0150083			ర	otact/Requ	Contact/Requestor SHAFER, MATT / NIELSEN, SKIP		Telephone No 4375/4289		
_	Oustonner	Maderx	Date	Tipe	Lecation	Continuer (sizoltype/quantity)	Sangle Andyrus		Presevence, Parteng
0150083- 003 002		SOLID			BLDG, 885 RM, 145 FLOOR TRENCH	126-ML/AG/1	SS03B002 (PCB/Pest CLP-Solid) [Routme]	Routine]	None 4 degrees C
0150083- 003 003	"	Soul			BLDG 865 RM 145 FLOOR TRENCH	125-ML / G /I	SS08C006 (TCLP Metals 1311) [Routine]	outne]	None 4 degrees C
0150083-		onos			BLDG. 865 RM 145 FLOOR TRENCH	GD-NIL / G.M	SSD8C010 (TCLP VOA 1311/8260) [Routine]	) [Routine]	None 4 degs C w/zhs
0150083- 003 005		SOLID			BLDG 885 RM. 145 FLOOR TRENCH	125-ML / AG /1	SS08C011 (TCLP Semi VOA 1311/8270B) [Routine]	/8270B) [Routme]	None 4 degs C w/zhs
01S0083- 004 002		SOLID			BLDG 865 RM. 146 FLOOR TRENCH	125-ML / AG /1	SS03B002 (PCB/Pest CLP-Solid) [Routine]	Routine]	None 4 degrees C
0150083- 004 003		SOLID			BLDG 865 RM 145 FLOOR TRENCH	125-NE / G.M	SS08C006 (TCLP Metals 1311) [Routine]	outne)	None 4 degrees C
01S0083- 004 004		SOLID			BLDG 886 RM. 145 FLOOR TRENCH	₩1.6 M	SS08C010 (TCLP VOA 1311/8260) [Routine]	) [Routine]	None 4 degs C wizhs
0150083- 004 005		Sould			BLDG. 865 RM 145 FLOOR TRENCH	125-ML / AG /1	SS08C011 (TCLP Semi VOA 1311/8270B) [Routme]	/8270B) [Routine]	None 4 degs C w/zhs
0150083- 005 001 Trub	Trig Blanks	AQUEOUS			BLDG, 865 PM 145 FLOOR TRENCH	40-4KL/G/1	SS01B005 (VOA 8260-Water) [Routine]	utne]	None 4 degs C w/zhs
01S0083- 005 002		AQUEOUS			PLDG. 885 RM. 145 FLOOR TRENCH	40-1/1 / G / I	SS0/B005 (VOA 8260-Water) [Routine]	utnej	None 4 degs C w/zbs
01S0083- 005 003	Oğ .	AQUEOUS			BLDG. 865 RM 146 FLOOR TRENCH	40-ML/G/I	SS01B005 (VOA 8260-Water) [Routine]	utine)	None 4 degs C wizhs
Retinquestral By		Date/Time	Received By		<b>1</b> 0	le/Time Reimpusished By	равь/ <u>Г</u> пве	Received By:	Date/Time
Reinquehed By		Date/Time	Received By		TA .	Dute/Time Eofinquished By:	Determin	Rearined By	Dac/lime
Relaqueshed By:		Date/Time	Received By		Dak	Date/Time Reinquished By	. Date/True	Received By	Date/Time
Refisquished By		Date/Time	Received By		D.	Date/Time Relinquished By:	Date/Time	Received By	Date/lime
UNAL SAMPLE D	Dannes   Melad (e.e., naturasi is entirase, disposed of ser isb procedure, used	reterrand to one	torner, dispor	ed of year lab	procedure, used in analytical process)	process)	Disposed By	٥	Date/Time

R.P.E.T.S.   Elements   Element	Commodore Advanced Sciences			IN-OF-CUSTOI	Y/SAMPL	CHAIN-OR-CUSTODY/SAMPLE ANALYSIS REQUEST	COC.# 01S0083#001	83#001
Control   Cont							Page 1 of	i 1
State   Continue   Continue   State   Continue   State   Continue   State   Continue   Continue   State   Continue	ampler(s)		(hme/date	<u> </u>	SEN. SKIP	Telephone No.		
FRESE   PACHETICS   PACHETIC	IN 01S0083			Ø.	TRENCH	Furchase Order/Charge Furchase Order/Charge	Code	
Infining 559 Laboratory  Related Of Shipuret  Nature	njeci Title BLDG. 865 (FLOOR TRENCH)			Legheok Ne.		Lee Chest No.	Temp.	
Registred COC (if tary)   SCREENING   SPECIAL INSTRUCTIONS   Float Tile		lory		Method of Shipment		Bill of Lating/Air Bill N.	5	
SOLID   PACKAL PROTECTIONS   Flad III				Related COC (if any)		PRE		
Continue   Maint   Diec   Tibe   Location   Continue   State   Location   Continue   Maint   Diec   Tibe   Location   Continue   C	SSEBLE SAMPLE HAZARDSRE o acid preserved samples DOT hazar	EMARKS rubins per 40 CFR	Part 136 3 Table II	7 YES OF NO	REQUIRE	SPECIAL INSTRUCTIONS		
Cutimer	** **	to cert i suprement o	2					
SOLID	-	Мант	-	-	Container (supply)	Sample Assays	Per	Preparative.
SOLID		AQUEOUS		•	20-ML / G /1	PA04A006 (Radscreen - DOT) [Rush]	None	
SOLID	180083- 72 001	AQUEOUS	<u> </u>		20-ML (G/1	PA04A006 (Radscreen - DOT) [Rush]	None	
SOLLD BLDG 868 RW 145 FLOOR TRENCH FLOOR TRE	150083- 33 001	OFTOS		BLDG. 865 RM. 145 FLOOR TRENCH	20-ML/G/1	PA04A015 (Radscreen - DOT) [Rush]	None	
Determine Received By: Daterflate Relayabled By: Daterflate Daterflate Received By: Daterflate Daterflate Daterflate Received By: Daterflate Daterflate Daterflate Daterflate Daterflate Daterflate Daterflate	150083- 14 001	grios		BLDG 865 RM 145 FLOOR TRENCH	20-NE / G //	PA04A015 (Radscreen - DOT) [Rush]	None	
Date/Time Received By: Date/Time Relayable By: Date/Time Bottles Relayabled By: Date/Time Date/Time Received By: Date/Time Date/Time Received By: Date/Time Date/Time Bottles Received By: Date/Time Date/Time Bottles Received By: Date/Time Date/Time Bottles Received By: Date/Time Bottles								
Date/Time Received By Date/Time Refinewished By: Date/Time Date/Time Received By: Date/Time Date/Time Date/Time Received By: Date/Time D								
Date/Line Received By: Date/Time Relanguated By: Date/Time Relanguated By: Date/Time Received By: Date/Time	kingmaked By-	Date/Time	Received By	and a		Date/Euro		Date/Time
Date/Nave Received By: Date/Nave Relampiated By Date/Nave Date/Nave Beckived By: Date/Nave Date/Nave Date/Nave Date/Nave Date/Nave Date/Nave Date/Nave Date/Nave Date/Nave Date/Nave Date/Nave Date/Nave Date/Nave Date/Nave	Regarded By		Received By-	<b>B</b> O	<del>                                     </del>	Data/Yane		Date/Time
Date/Time Received Dy: Date/Time Relaqueshed By: Date/Time	Enquished By	_	Received By:	Date	+	Date/Time		Date/Time
	ingrided By:	Date/Time	Received Dy:	Dad	+	DiteTine		Dato/Time
FINAL SAMPLE. Disposed blethod (e.g., returned to customer, disposed of per lab procedure, used in analytical process) Disposed By DISPOSITION	<del> </del>	(e.g., returned to cus	stoner, disposed of pe	r fab procedure, used in analytical	process)	Disposed By	Date/Time	

mon han



KAISER HILL

COMPANY

ANALYTICAL SERVICES DIVISION

be, fe k
but not a
problem

#### FAX COVER SHEET FOR FINAL DATA PACKAGE REPORTS

RIN NUM	IBER: 0130083 1CCP MA	_
FROM:	SKIP NIELSEN	
PHONE:	(303) 966-4289	
FAX:	(303) 966-8345	
TO:	M Shafer	
FAX:	6078	
PHONE:		
NUMBER	R OF PAGES, INCLUDING COVER SHEET:	
Please con	if the fax is not received in its entirety.	

#### NOTE:

This facsimile contains the results, in the Final Sample Data Package, for the analytes requested in this RIN. The package has been scheduled for verification or validation. Until verification or validation is completed the results must be considered preliminary. You will be forwarded a copy of the verification or validation report shortly after it is received by ASD. You should examine this report to determine if any qualifiers (flags) have been attached to the results. Flagged data may or may not be suitable for use as originally intended and should be evaluated for acceptability before use. If you have any questions please contact your Analytical Services. Project Lead, do no contact the laboratory directly.



#### **Analytical Report**

Client: K-H R1N#01S0083

LVL#: 0106L204

W.O.#: 11830-001-001-9999-00 Date Received . 06-29-01

#### SW846 METALS

- 1 This narrative covers the analyses of 1 TCLP leachate samples.
- The samples were prepared and analyzed in accordance with <u>SW-846</u> protocol and reported with CLP deliverable. All samples were prepared with a 10mL initial volume and a 100mL final volume resulting in a ten fold dilution due to low sample volume. With this dilution, the client requested limits were exceeded for Silver, Iron and Beryllium. These analytes are listed as analytes on the Universal Treatment Standards (UTS) List with the exception of Iron. The concentrations for these analytes are well below the UTS limits even with the dilution. Mercury was run and reported at a ten fold dilution and was below the RDL3 limit for Mercury. The client COC stated that the sample 01S0083-001 003 was a solid, however the sample received was a water with some suspended sediment according to Lionville Laboratory COC. Sample 01S0083-001 003S was rerun and reported at a five fold dilution for Barrum.
- 3 ICVs, CCVs, and ICSs stock standards were purchased from Inorganic Ventures Laboratory and High Purity
- 4. All analyses were performed within the required holding times
- 5 The cooler temperature (3 0°C) has been recorded on the Chain of Custody
- 6 All Initial and Continuing Calibration Ventications (ICV/CCVs) were within control limits.
- 7 All Initial and Continuing Calibration Blanks (ICB/CCBs) were within method criteria with the exception of Beryllium CCB2 and CCB3 were above the RDL3 limit, however the results were below the UTS limits
- All preparation/method blanks were below the chent requested limits found in RDL3 with the exception of MB2 for Beryllium, Mercury and Zine and MB3 for Mercury, however the results were below the UTS limits. Refer to form 3
- 9. All ICP Interference Check Standards were within control limits. Refer to form 4.

The results presented in this report relate only to the analytical testing and conditions of the samples at receipt and during storage. All pages of this report its integral parts of the analytical data. Therefore, this report should only be reproduced in its entirety of 244 pages.

- 10 All laboratory control samples (LCS) were within the 80-120% control limits. Refer to 10rm 7
- The serial dilution percent differences were within <u>SW-846</u> control limits. Refer to form 9 11
- 12 All duplicate analyses were within the 20% Relative Percent Difference (RPD) control limits Refer to form 6
- 13 All sample IDs were changed to accommodate the LPA naming convention which allows a maximum of 6 characters on all CLP Forms. Refer to the comments section of form 1 for the original ID.
- 14 Recoveries on the Laboratory Summary Report and CLP forms will vary depending on the number of significant figures used in the recovery calculation.
- 15 The 1CLP extract from sample 01S0083-001 003 was selected for the ICP metals matrix spike (MS) for this analytical batch. The MS recoveries for the eight RCRA analytes and the additional regulatory metal analytes in the TCLP extract were above 50% as per method criteria. The remaining analytes were not spiked. Please refer to form 5
- 16 As of January 27, 2001, Recra LabNet Philadelphia became Lionville Laboratory Incorporated Some forms may still reference Reera LabNet Philadelphia

Iam Damels

Deputy Laboratory Manager

Lionville Laboratory Incorporated

nim\m06-204



			Ç	FAIN	OF CUSION	KISAMPL	CHAIN OF CUSTOLY/SAMPLE ANALYSIS REQUEST	JES1		\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\
1	PEFFS /								Page	1 of 1
San					act/Requester	EN SKIP	Telephone No 4375-4289	lephune No 4375:4289		
0120083	12	8			BLDG. 865 RM. 145 FL. TRENCH	RENCH	Purcha	Purchase Order/Charge Code EED50120	Corde	
Party Title It At 263 F	Title  1.100 THENCH connected us a 55 pag. (1987) 1	woesed was 55 gal	ואנואני	3	0	Steo VAN	Ice Chest No	# No	Temp	
. 44.	Liouville Laboratory Inc	Inc		We	ויייו	, , ,	Pom Bert	BE of Ledbeg/Alv Bill No.	453 2127	2755
Protocol CAS	3	003		Reh	Related COC (King) O.	58005	# 001 PRE			
SSIBLE SAN acid preserve other known t	BAZARDS ples DOT ha fous substan	MARKS lous per 40 CFR Pr reseal? YES or NO	A 136.3 Tal	sie II7 YES a		SCREENING REQUIRED	STECIAL INSTRUCTIONS	Bold Time		
Bostle No	Customer	Matrix	Date	Time	Lacation	Contamer	S.	Semple Analysis		Preservative
01S0083- 001.002	DIOCOL 2014	dilos	1/27/	0812	BLDG 865 RM, 145 FLOOR TRENCH	125-ML/AG/I	SS03B002 (PCB/Pest CLP-Solid) [Routine]	P-Solid) [Rout	ıne] c	Nane 4 degrees C
0150083-		SOLID		2850	BLDG 865 RM. 145 FLOOR TRENCH	125-ML/G/I	SS08C006 (TCLP Metals 1311) [Routine]	1311) (Routin	[e]	None 4 degrees C
01 S0083- 001 004		SOLIO		8150	BLDG 865 RM 145 FLOOR TRENCH	60-WL / G / 1	SSDBC010 (TCLP VOA 1311/8260) [Routine]	311/8260) [Rc	outineJ	None 4 degs C wizhs
0150083- 001 005		SOLID	>	7814	BLDG 865 RM 145 FLOOR TRENCH	125-ML/AG/I	SS08C011 (TCLP Sem V	Sern VOA 1311/8270B) [Routine]	0B) [Routine]	None 4 degs C wizhs
0150083- 002.001	01001203	AQUEOUS	424	2715	BLDG BSS RM. 145 FLOOR TRENCH	40-41/1-1 G //	SS01B005 (VOA 8260-Water) (Routine)	ater) (Routine		None 4 degs C wizhs
0150083- 002.002		AQUEOUS			BLDG. 865 RM. 145 FLOOR TRENCH	404% / G / t	SS01B005 (VOA 8260-Water) [Roulme]	ater) [Roulme	=	None 4 dags C w/zha
01S0083- 002.003	-1	AQUEOUS	<b>-</b> >	>	BLDG. BGS RM. 145 FLOOR TRENCH	40-FML/ G/1	SS01B005 (VOA 8260-Water) [Routine]	ater) (Roukine	<b>T</b>	None 4 degs C wizh
Name of Street	-11. 1/F	Date/Turne	Received By	4	STLO E#JJY	Absortine Reinquished By		OnterTime Received By	Ву	Date/Time
120 A	档		3		<u></u> 2	Dec.True Relaquished By Office		Date Time Received By	(A)	Date/Time
られる	-4	COS 1012	14	73 OF		Deserture Reinquehed By		Date/Time Received By	189	DaterTinge
(SE) B	180 6	6-29-01 9100	Caly	hand	P 10-88-9	Due Time Relanguated By 9:00		Directime Received By	By.	Date/Tane
FINAL SAMPLE	Dayond Mes	ed (e.g., returned to quito	18	r, disposed of par 16 pre	Codure, used to spulyter	(Date)	Dapased By		DuteTime	

	INORGANIC ANAI	1 YSES DATA SHEET	EPA SAMPLE NO.
Lab Name: LIONVILLE_I Lab Code: LVLI Matrix (soil/water): Level (low/med): % Solids:	Case No.: 01500	Contract: 11830-1 SAS No.: Lab Sam Date Re	001003 SDG No.: 001003 ple ID: 0106L204-005 ceived: 06/29/01

Concentration Units (ug/L or mg/kg dry weight): UG/L\_

	r		Γ		
CAS No.	Analyte	Concentration	С	Q	M
7429-90-5	Aluminum	966	B		P_
7440-36-0	Antimony_	29.2	В	·	P-
7440-38-2	Arsenic	23.0	Ū		P-
7440-39-3	Barium	39.9	B	<del></del>	$\bar{P}^-$
7440-41-7	Beryllium	8.0	٦,		P-
7440-43-9	Cadmium	3.0	$\overline{\mathbf{U}}$		P-
7440-70-2	Calcium	17900	В		
7440-47-3	Chromium	9.0	Ū		P
7440-48-4	Cobalt	8.0	Ŭ		p_
7440-50-8	Copper	30.7	В		p
7439-89-6	Iron	3050	-	i ————	$ P^- $
7439-92-1	Lead	26.0	U		P-
7439-95-4	Magnesium	3540	В	·	$p^{-}$
7439-96-5	Manganese	106	В		P-
7439-97-6	Mercury	1.0	Ū		Ā⊽
7440-02-0	Nickel	40.0	В		P
	Potassium	118000	-		$\bar{P}^-$
7782-49-2	Selenium	26.0	ਹੋ	\ <del></del>	P_
7440-22-4	Silver	10.0	Ū	<del></del>	$ \bar{P}^- $
7440-28-0	Thallium	39.0	U		P-
7440~62-2	Vanadium	8.9	В		P_
7440-66-6	Zinc	151	В		p_
7439-98-7	Molybdenu	27.7	В		p-
7440-24-6	Strontium	91.5	В		$ \mathbf{p}^{-} $
7440-31-5	Tin	35.0	บั		$\mathbf{p}^-$
7439-93-2	Lithium	88.4	В		P_
11-09-6	Uranium	107	Ü		P
					[ -
		w-,	-		
	-			}	
			_		
~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~		· · · · · · · · · · · · · · · · · · ·	_		
			•		
·	· ——	·	-	·	,

Before; After:	Clarity Clarity	Before: After:	 Texture: Artifacts:	-
nts: 50083-001. LP_OF_SAMI				
 	FOR	MI - IN		

#### 3 BLANKS

Lab	Name;	LIONVILLE_	LABORATORY	_	Contra	act: 1	11830-1			
Lab	Code.	TATI	Case No.:	01800	SAS No	o,: _		SDG	No.:	001003
Frep	paratio	on Blank Ma	atrix (soil/wat	er); WATE	R					
Frer	aratio	n Blank Co	oncentration Un	its (ug/L	or mo	z/ka):	: UG/L			

Aluminum 30.9 B 53.8 B 104.0 B 74.0 B 72.950 B P Antimony 1.9 U 1.9 B 1.9 U 1.9 U 1.900 U P Arsenic 2.3 U 2.3 U 2.3 U 2.3 U 2.514 B P Barium 0.2 U 0.2 U 0.2 U 0.2 U 0.2 U 0.200 U P Beryllium 0.3 B 0.5 B 1.1 0.8 0.772 B P Cadmium 0.3 U 0.3 U -0.3 B 0.3 U 36.540 B P Calcium 8.1 U 10.7 B 10.0 B 8.1 U 36.540 B P Chromium 0.9 U 0.9 U 0.9 U 0.9 U 0.900 U P Cobalt 0.8 U 0.8 U 0.8 U 0.8 U 0.800 U P Cobalt 0.8 U 0.8 U 0.8 U 0.8 U 0.800 U P Copper -0.7 B -0.9 B -2.6 B -2.5 B -1.860 B P Iron 15.7 U 84.4 B 88.6 B 15.7 U 15.700 U P Lead 2.6 U 2.6 U 2.600 U P Manganese 0.1 B 0.5 B 0.5 B 0.2 B 0.100 U P Marcury 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.		Initial Calib.		Cont	in	uing Calib		tion		Prepa-	-
Analyte (ug/L) C 1 C 2 C 3 C Blank C M  Aluminum 30.9 B 53.8 B 104.0 B 74.0 B 72.950 B P  Antimony 1.9 U 1.9 B 1.9 U 1.9 U 1.900 U P  Arsenic 2.3 U 2.3 U 2.3 U 2.3 U -2.514 B P  Barium 0.2 U 0.2 U 0.2 U 0.2 U 0.2 U 0.20 U P  Beryllium 0.3 B 0.5 B 1.1 0.8 0.772 B C  Cadmium 0.3 U 0.3 U -0.3 B 0.3 U 0.30 U P  Calcium 8.1 U 10.7 B 10.0 B 8.1 U 36.540 B P  Chromium 0.9 U 0.9 U 0.9 U 0.9 U 0.90 U 0.900 U P  Cobalt 0.8 U 0.8 U 0.8 U 0.8 U 0.8 U 0.8 U 0.80 U P  Copper -0.7 B -0.9 B -2.6 B -2.5 B -1.860 B P  Lead 2.6 U 2.6 U 2.6 U 2.6 U 2.6 U 2.600 U P  Magnesium 8.8 U 8.8 U 8.8 U 8.8 U 8.8 U 8.8 0 B 0.1 U 0.100 U P  Magnesium 8.8 U 8.8 U 8.8 U 8.8 U 8.8 U 8.8 O D  Magnesium 35.3 U 35.3 U 35.3 U 35.3 U 35.300 U P  Potassium 35.3 U 35.3 U 35.3 U 35.3 U 35.300 U P  Selenium 2.6 U 2.6 U 2.6 U 2.6 U 2.6 U 2.610 B P  Thallium 3.9 U 3.9 U 3.9 U 3.9 U 3.900 U P  Zinc 0.3 U 0.3 U 0.3 U 0.3 U 0.3 U 0.3 U 0.2 U 0.3 U 0.3 U D  Strontium 0.7 U 1.0 B 0.7 U 0.7 B 0.700 U P  Thallium 3.9 U 3.9 U 3.9 U 3.9 U 3.900 U P  Strontium 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U		Blank			B	lank (ug/L	)		J		
Antimony 1.9 U 1.9 B 1.9 U 1.9 U 1.900 U PArsenic 7.3 U 2.3 U 2.3 U 2.3 U 2.514 B PB Barium 0.2 U 0.2 U 0.2 U 0.2 U 0.2 U 0.2 U 0.200 U PERPILIUM 0.3 B 0.5 B 1.1 B 0.8 U 0.300 U PCARSIUM 8.1 U 10.7 B 10.0 B 8.1 U 36.540 B PCARSIUM 8.1 U 10.7 B 10.0 B 8.1 U 36.540 B PCARSIUM 8.1 U 10.7 B 10.0 B 8.1 U 36.540 B PCARSIUM 8.1 U 10.7 B 10.0 B 8.1 U 36.540 B PCARSIUM 8.1 U 10.7 B 10.0 B 8.1 U 36.540 B PCARSIUM 8.1 U 10.7 B 10.0 B 8.1 U 36.540 B PCARSIUM 8.1 U 10.7 B 10.0 B 8.1 U 36.540 B PCARSIUM 8.1 U 10.7 B 10.0 B 8.1 U 36.540 B PCARSIUM 8.1 U 10.7 B 10.0 B 10.0 B 8.1 U 36.540 B PCARSIUM 8.1 U 10.7 B 10.0 B 10.0 B 10.0 B 10.0 B 10.0 B 10.0 B 10.0 B 10.0 B 10.0 B 10.0 B 10.0 B 10.0 B 10.0 B 10.0 B 10.0 B 10.0 B 10.0 B 10.0 B 10.0 B 10.0 B 10.0 B 10.0 B 10.0 B 10.0 B 10.0 B 10.0 B 10.0 B 10.0 B 10.0 B 10.0 B 10.0 B 10.0 B 10.0 B 10.0 B 10.0 B 10.0 B 10.0 B 10.0 B 10.0 B 10.0 B 10.0 B 10.0 B 10.0 B 10.0 B 10.0 B 10.0 B 10.0 B 10.0 B 10.0 B 10.0 B 10.0 B 10.0 B 10.0 B 10.0 B 10.0 B 10.0 B 10.0 B 10.0 B 10.0 B 10.0 B 10.0 B 10.0 B 10.0 B 10.0 B 10.0 B 10.0 B 10.0 B 10.0 B 10.0 B 10.0 B 10.0 B 10.0 B 10.0 B 10.0 B 10.0 B 10.0 B 10.0 B 10.0 B 10.0 B 10.0 B 10.0 B 10.0 B 10.0 B 10.0 B 10.0 B 10.0 B 10.0 B 10.0 B 10.0 B 10.0 B 10.0 B 10.0 B 10.0 B 10.0 B 10.0 B 10.0 B 10.0 B 10.0 B 10.0 B 10.0 B 10.0 B 10.0 B 10.0 B 10.0 B 10.0 B 10.0 B 10.0 B 10.0 B 10.0 B 10.0 B 10.0 B 10.0 B 10.0 B 10.0 B 10.0 B 10.0 B 10.0 B 10.0 B 10.0 B 10.0 B 10.0 B 10.0 B 10.0 B 10.0 B 10.0 B 10.0 B 10.0 B 10.0 B 10.0 B 10.0 B 10.0 B 10.0 B 10.0 B 10.0 B 10.0 B 10.0 B 10.0 B 10.0 B 10.0 B 10.0 B 10.0 B 10.0 B 10.0 B 10.0 B 10.0 B 10.0 B 10.0 B 10.0 B 10.0 B 10.0 B 10.0 B 10.0 B 10.0 B 10.0 B 10.0 B 10.0 B 10.0 B 10.0 B 10.0 B 10.0 B 10.0 B 10.0 B 10.0 B 10.0 B 10.0 B 10.0 B 10.0 B 10.0 B 10.0 B 10.0 B 10.0 B 10.0 B 10.0 B 10.0 B 10.0 B 10.0 B 10.0 B 10.0 B 10.0 B 10.0 B 10.0 B 10.0 B 10.0 B 10.0 B 10.0 B 10.0 B 10.0 B 10.0 B 10.0 B 10.0 B 10.0 B 10.0 B 10.0 B 10.0 B 10.0 B 10.0 B 10.0 B 10.0 B 10.0 B 10.0 B 10.0 B 10.0 B 10.0 B 10.0 B 10.0 B 10.0 B 1	Analyte	(ug/L)	C	1	С			3	C	Blank C M	į į
Arsenic	Aluminum		B	53.8					B		
Barium											
Cadmium				2.3							_
Cadmium			U	0.2_			U		U		
Calcium	Beryllium			0.5					1_1		_
Chromium	Cadmium_	0.3	U		U	-0.3	B	0.3	101	0.300 U P	_
Cobalt	Calcium_				B				טן	36.540 B P	_
Copper	Chromium_		U						ט	0.900 U P	
Iron	Cobalt		U		U		ľ				_
Lead       2.6       U       2.600       U       P         Magnesium       8.8       U       8.8       U       8.8       U       8.8       U       8.800       U       P         Manganese       0.1       B       0.5       B       0.5       B       0.2       B       0.100       U       P         Mercury       0.1       U       0.1       U       0.1       U       0.100       U       AV       0.1       U       0.100       U       P       0.2       0.2       U       1.2	Copper				B		В		B		
Magnesium       8.8       U       8.8       U       8.8       U       8.8       U       8.8       U       8.800       U       P         Manganese       0.1       B       0.5       B       0.5       B       0.2       B       0.100       U       P         Mercury       0.1       U       0.1       U       0.1       U       0.100       U       AV         Nickel       1.2       U       1.2       U       1.2       U       1.200       U       P         Potassium       35.3       U       35.3       U       35.3       U       35.3       U       35.300       U       P         Selenium       2.6       U       2.6       U       2.6       U       2.6       U       -2.610       B       P         Silver       1.0       U       1.0       U       -1.0       B       1.0       U       1.000       U       P         Thallium       3.9       U       3.9       U       3.9       U       3.900       U       P         Zinc       0.3       U       0.3       U       0.3       U       0.3 <t< td=""><td>Iron</td><td>15.7</td><td></td><td></td><td>B</td><td>88.6</td><td>B</td><td></td><td></td><td></td><td></td></t<>	Iron	15.7			B	88.6	B				
Manganese       0.1       B       0.5       B       0.5       B       0.2       B       0.100       U       P         Mercury       0.1       U       0.1       U       0.1       U       0.1       U       0.100       U       AV         Nickel       1.2       U       1.2       U       1.2       U       1.200       U       P         Potassium       35.3       U       35.3       U       35.3       U       35.300       U       P         Selenium       2.6       U       2.6       U       2.6       U       2.6       U       -2.610       B       P       -2.610       D       -2.610       D       -2.610       D					U		U	2.6			_
Mercury         0.1         U         0.100         U         AV           Nickel         1.2         U         1.2         U         1.2         U         1.200         U         P           Potassium         35.3         U         35.3         U         35.3         U         35.300         U         P           Selenium         2 6         U         2.6         U         2.6         U         -2.610         B         P         -2.610         D         -2.610         D         -2.610	Magnesium	8.8	ַ ע	8.8	U	8.8	U		U		
Nickel 1.2 U 1.2 U 1.2 U 1.2 U 1.2 U 1.2 U 1.2 U 1.200 U P Potassium 35.3 U 35.3 U 35.3 U 35.300 U P Selenium 2.6 U 2.6 U 2.6 U 2.6 U -2.610 B P Silver 1.0 U 1.0 U -1.0 B 1.0 U 1.000 U P Thallium 3.9 U 3.9 U 3.9 U 3.9 U 3.900 U P Vanadium 0.7 U 1.0 B 0.7 U 0.7 B 0.700 U P Zinc 0.3 U 0.3 U 0.3 U 0.3 U 1.536 B P Molybdenu 1.0 U 1.0 U 1.0 U 1.0 U 1.000 U P Strontium 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.100 U P Tin 3.5 U 3.5 U 3.5 U 3.5 U 3.500 U P T U 10.7 U 10.7 U 10.7 U 10.700 U P	Manganese				В				B	0.100 U P	_
Potassium         35.3         U         35.3         U         35.3         U         35.3         U         35.3         U         35.3         U         35.300         U         P           Selenium         2.6         U         2.6         U         2.6         U         2.6         U         -2.610         B         P           Silver         1.0         U         1.0         U         -1.0         B         1.0         U         1.000         U         P           Thallium         3.9         U         3.9         U         3.9         U         3.900         U         P         0.700         U         P         0.100         U         1.000         U         1.000         U         1.000         U         0.100         U         0.100         U         0.100 </td <td>Mercury</td> <td>0,1</td> <td></td> <td></td> <td>-</td> <td></td> <td>U</td> <td></td> <td></td> <td></td> <td></td>	Mercury	0,1			-		U				
Selenium       2 6       U       2.6       U       2.6       U       2.6       U       -2.610 B       P         Silver       1.0       U       1.0       U       -1.0 B       1.0 U       1.000 U       P         Thallium       3.9       U       3.9       U       3.9       U       3.900 U       P         Vanadium       0.7       U       1.0 B       0.7 U       0.7 B       0.700 U       P         Zinc       0.3       U       0.3 U       0.3 U       0.3 U       0.3 U       0.3 U       0.3 U       0.3 U       0.3 U       0.3 U       0.3 U       0.3 U       0.3 U       0.3 U       0.3 U       0.3 U       0.3 U       0.3 U       0.3 U       0.3 U       0.3 U       0.3 U       0.3 U       0.3 U       0.3 U       0.3 U       0.3 U       0.3 U       0.3 U       0.3 U       0.3 U       0.3 U       0.3 U       0.3 U       0.3 U       0.3 U       0.3 U       0.3 U       0.3 U       0.3 U       0.3 U       0.3 U       0.3 U       0.3 U       0.3 U       0.3 U       0.3 U       0.3 U       0.3 U       0.3 U       0.3 U       0.3 U       0.3 U       0.3 U       0.3 U       0.3 U       0.3 U </td <td>Nickel</td> <td></td> <td>יט ן</td> <td>1.2</td> <td>ש</td> <td>1.2</td> <td>U</td> <td></td> <td></td> <td></td> <td>_</td>	Nickel		יט ן	1.2	ש	1.2	U				_
Silver       1.0       U       1.0       U       -1.0       B       1.0       U       1.000       U       P         Thallium       3.9       U       3.9       U       3.9       U       3.900       U       P         Vanadum       0.7       U       1.0       B       0.7       U       0.7       D       0.700       U       P         Zinc       0.3       U       0.3       U       0.3       U       0.3       U       0.3       U       1.536       B       P         Molybdenu       1.0       U       1.0       U       1.0       U       1.0       U       1.000       U       P         Strontium       0.1       U       0.1       U       0.1       U       0.1       U       0.100       U       P         Lithium       0.5       B       0.3       B       1.0       B       1.4       B       3.500       U       P         Uranium       10.7       U       10.7       U       10.7       U       10.700       U       10.700       U       10.700       U       10.700       U       10.700       U       <		35.3			U						
Thallium 3.9 U 3.9 U 3.9 U 3.9 U 3.900 U P Yanadum 0.7 U 1.0 B 0.7 U 0.7 B 0.700 U P Sinc 0.3 U 0.3 U 0.3 U 0.3 U 1.536 B P Molybdenu 1.0 U 1.0 U 1.0 U 1.0 U 1.000 U P Strontium 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.				2.6	U	2.6			U		
Vanadum       0.7       0       1.0       B       0.7       0       0.7       0       0.7       0       0.7       0       0.7       0       0.7       0       0.7       0       0.7       0       0.7       0       0.7       0       0.7       0       0.7       0       0.7       0       0.3       0       0.3       0       0.3       0       0.3       0       0.3       0       0.1       0       0.1       0       0.1       0       0.1       0       0.1       0       0.1       0       0.1       0       0.1       0       0.1       0       0.1       0       0.1       0       0.1       0       0.1       0       0.1       0       0.1       0       0.1       0       0.1       0       0.1       0       0.1       0       0.1       0       0.1       0       0.1       0       0.1       0       0.1       0       0.1       0       0.1       0       0.1       0       0.1       0       0.1       0       0.1       0       0.1       0       0.1       0       0.1       0       0.1       0       0.1       0       0.1			U		U		В	1.0	U		_
Zinc 0.3 U 0.3 U 0.3 U 0.3 U 1.536 B P Molybdenu 1.0 U 1.0 U 1.0 U 1.0 U 1.000 U P Strontium 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.1 U 0.100 U P Lithium 0.5 B 0.3 B 1.0 B 1.4 B 3.099 B P Uranium 10.7 U 10.7 U 10.7 U 10.700 U P		3.9		3,9	U		U	3.9			
Molybdenu       1.0       U       0.1       U       0.1       U       0.1       U       0.100       U       P         Tin       3.5       U       3.5       U       3.5       U       3.500       U       P         Lithium       0.5       B       0.3       B       1.0       B       1.4       B       3.099       B       P         Uranium       10.7       U       10.7       U       10.7       U       10.700       U       P		0.7		1.0	В	0.7		0.7	B		
Strontium         0.1         U         0.100         U         P           Tin         3.5         U         3.5         U         3.500         U         P           Lithium         0.5         B         0.3         B         1.0         B         1.4         B         3.099         B         P           Uranium         10.7         U         10.7         U         10.700         U         P		0.3		0.3	บ	0.3	U	0.3			_ !
Tin 3.5 U 3.5 U 3.5 U 3.5 U 3.5 U 3.5 U 3.5 O U P Lithium 0.5 B 0.3 B 1.0 B 1.4 B 3.099 B P Uranium 10.7 U 10.7 U 10.7 U 10.7 U 10.7 O U P	Molybdenu			1.0	U	1.0	U	1.0		1.000 U P	_
Lithium     0.5     B     0.3     B     1.0     B     1.4     B     3.099     B     P       Uranium     10.7     U     10.7     U     10.7     U     10.7     U	Strontium	0.1			U		U	0.1		0.100 U P	_
Uranium 10.7 U 10.7 U 10.7 U 10.7 U 10.7 U 10.7 U 10.700 U P	Tin			3.5	Ų	3.5	U	3.5	U		
	Lithium	0.5	В	0.3	В	1.0	В	1.4		3.099 B P	_
	Uranium	10.7	ับ	10.7	U	10.7	U	10.7	טן	10.700 U P	_
			-		-		-		-		
			****		_	·	-		1-1	1 11	-
	***					\	-	<del></del>	1-1	1 1 1	
			-					<del></del>	1-1	1	-
	u <del></del>	<del></del>	-			<del></del>		<del></del>	1-1	-  -	~

FORM III - IN

#### 3 BIANKS

Lab Name	: LIONVILLE_LA	BORATORY	Contract:	11830-1		
Lab Code	: LVLI	Case No.: 01800	SAS No.:		SDG No.:	001003
Preparat	ion Blank Matr	ix (soil/water):	WATER			
Preparat	ion Blank Conce	entration Units (	ug/L or mg/kg)	: UG/L		

Analyte	Initial Calib. Blank (ug/L)	С	Conti	B: C	uing Calibr lank (ug/L) 2	at C	:10n 3	С	Prepa- ration Blank C M	
Aluminum Antimony Arsenic Barıum Beryllium Cadmium Calcium Chromium Cobalt Copper Iron Lead Magnesium Manganese Mercury Nickel Potassium Selenium Silver Thallium Vanadium Zinc Molybdenu Strontium Tin Lithium Uranium			28.0 2.4 3.0 0.2 0.4 0.3 8.1 0.9 15.7 2.6 8.8 0.1 1.2 35.3 2.6 1.0 3.9 0.7 0.3 1.0 3.5 1.0		12.7 2.5 -2.7 0.2 0.3 8.1 0.9 0.8 -1.4 15.7 2.6 8.8 0.1 0.1 1.2 35.3 2.6 1.0 3.9 0.7 0.3 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0		0.1_		145.010 B P 2.553 B P 2.300 U P 32.910 B P 1.171 P 1.171 P 1.171 P 1.171 P 1.171 P 1.171 P 1.171 P 1.171 P 1.171 P 1.171 P 1.171 P 1.171 P 1.171 P 1.171 P 1.171 P 1.171 P 1.171 P 1.171 P 1.171 P 1.171 P 1.171 P 1.171 P 1.171 P 1.171 P 1.171 P 1.171 P 1.171 P 1.171 P 1.171 P 1.171 P 1.171 P 1.171 P 1.171 P 1.171 P 1.171 P 1.171 P 1.171 P 1.171 P 1.171 P 1.171 P 1.171 P 1.171 P 1.171 P 1.171 P 1.171 P 1.171 P 1.171 P 1.171 P 1.171 P 1.171 P 1.171 P 1.171 P 1.171 P 1.171 P 1.171 P 1.171 P 1.171 P 1.171 P 1.171 P 1.171 P 1.171 P 1.171 P 1.171 P 1.171 P 1.171 P 1.171 P 1.171 P 1.171 P 1.171 P 1.171 P 1.171 P 1.171 P 1.171 P 1.171 P 1.171 P 1.171 P 1.171 P 1.171 P 1.171 P 1.171 P 1.171 P 1.171 P 1.171 P 1.171 P 1.171 P 1.171 P 1.171 P 1.171 P 1.171 P 1.171 P 1.171 P 1.171 P 1.171 P 1.171 P 1.171 P 1.171 P 1.171 P 1.171 P 1.171 P 1.171 P 1.171 P 1.171 P 1.171 P 1.171 P 1.171 P 1.171 P 1.171 P 1.171 P 1.171 P 1.171 P 1.171 P 1.171 P 1.171 P 1.171 P 1.171 P 1.171 P 1.171 P 1.171 P 1.171 P 1.171 P 1.171 P 1.171 P 1.171 P 1.171 P 1.171 P 1.171 P 1.171 P 1.171 P 1.171 P 1.171 P 1.171 P 1.171 P 1.171 P 1.171 P 1.171 P 1.171 P 1.171 P 1.171 P 1.171 P 1.171 P 1.171 P 1.171 P 1.171 P 1.171 P 1.171 P 1.171 P 1.171 P 1.171 P 1.171 P 1.171 P 1.171 P 1.171 P 1.171 P 1.171 P 1.171 P 1.171 P 1.171 P 1.171 P 1.171 P 1.171 P 1.171 P 1.171 P 1.171 P 1.171 P 1.171 P 1.171 P 1.171 P 1.171 P 1.171 P 1.171 P 1.171 P 1.171 P 1.171 P 1.171 P 1.171 P 1.171 P 1.171 P 1.171 P 1.171 P 1.171 P 1.171 P 1.171 P 1.171 P 1.171 P 1.171 P 1.171 P 1.171 P 1.171 P 1.171 P 1.171 P 1.171 P 1.171 P 1.171 P 1.171 P 1.171 P 1.171 P 1.171 P 1.171 P 1.171 P 1.171 P 1.171 P 1.171 P 1.171 P 1.171 P 1.171 P 1.171 P 1.171 P 1.171 P 1.171 P 1.171 P 1.171 P 1.171 P 1.171 P 1.171 P 1.171 P 1.171 P 1.171 P 1.171 P 1.171 P 1.171 P 1.171 P 1.171 P 1.171 P 1.171 P 1.171 P 1.171 P 1.171 P 1.171 P 1.171 P 1.171 P 1.171 P 1.171 P 1.171 P 1.171 P 1.171 P 1.171 P 1.171 P 1.171 P 1.171 P 1.171 P 1.171 P 1.171 P 1.171 P 1.171 P 1.171 P 1.171 P 1.171 P 1.171 P 1.171 P 1.171 P 1.1	

FORM III - IN

#### U.S. FPA

#### 3 BLANKS

Lab Name:	LIONVILLE_LA	BORATORY	Contract:	11830-1_	_	
Lab Code:	TA1'1	Case No.: 0180	O SAS No.:		SDG No.:	001003
Preparati	on Blank Matr	ix (soil/water):	WATER			
Preparati	on Blank Conc	entration Units	(ug/L or mg/kg	): UG/L		

Analyte	Initial Calib. Blank (ug/L)	С	Conti 1	ni B)	ing Calibr lank (ug/L) 2	at	С	Prepa- ration Blank C	м
Aluminum Antimony Arsenic Barium Beryllium Cadmium Calcium Chromium Cobalt Copper Iron Lead Magnesium Manganese Mercury Nickel Potassium Selenium Silver Thallium Vanadium Zinc Molybdenu Strontium Uranium			0.1					0.510	NR NR NR NR NR NR NR NR NR NR NR NR NR N
				-		-	_		

FORM III - IN

#### U.S. FPA

6	,
DUPLI	CATES

EPA SAMPLE NO.

001003D Jab Name: LIONVILLE\_LABORATORY\_\_\_\_\_ Contract: 11830-1\_

Lab Code: LVLT Case No.: 01800 SAS No.: SDG No.: 001003

Matrix (soil/water): WATER

Level (low/med): \_LOW\_\_

% Solids for Sample: \_\_0.0

% Solids for Duplicate: \_\_\_0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L\_

Analyte	Control Limit	Sample (S) C	Duplicate (D) C	RPD Q N
Aluminum Antimony Arsenic Barium Beryllium Cadmium Calcium Chromium Chromium Chrom Iron Load Magnesium Manganese Mercury Nickel Potassium Selenium Silver Thallium Vanadium Zinc Molybdenu Strontium Tin Lithium Uranium		966.3000 B 29.2100 B 23.0000 U 39.8900 B 8.0400 30.0000 Ū 17944.7000 B 9.0000 U 30.6700 B 3045.8000 26.0000 Ū 3538.5000 B 105.6000 B 1.0000 U 39.9700 B 117836.2900 26.0000 Ū 10.0000 U 39.9700 B 151.1100 B 27.6900 B 91.4600 B 35.0000 U 88.4100 B 107.0000 U	911.5000 B	5.8 P  24.3 P  1.1 P  12.1 P  12.1 P  200.0 P  23.7 P  0.6 P  200.0 P  0.8 P  1.0 P  1.1 P  1.1 P  6.5 P  31.2 P  2.5 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P  9.1 P

FORM VI - IN

## LABORATORY CONTROL SAMPLE

Lab Name: LIONVII	LE_LABORATORY	Contract: 11830-1	
Lab Code: LVLI	Case No.: 01800	SAS No.:	SDG No.: 001003
Solid LCS Source:			
Aqueous LCS Sourc	e: IV		

Analyte	Aque True	eous (ug/] Found	L) %R	T'rue	Soli Found	d C	(mg/kg) Li	mits	\$ F
Aluminum_	5000.0	_5187.80	103.8						
Antimony_	3000.0	3129.86	104.3						l
Arsenic	10000.0	10260.36	102.6			_			
Barium	5000.0	4896.39	97.9		}				
Beryllium	250.0	~ 258.51	103.4						
Cadmium	250.0	263.33	105.3			_			
Calcium	25000.0	26393.78	105.6	,—————————————————————————————————————		-			
Chromium	500.0	534.87	107.0			-1			[
Cobalt	2500.0	2629.58	105.2			-			
Copper	1250.0	1230,30	98.4			-1			
Iron	5000.0	5081.85	T01.6		[	-			
Lead	2500.0	72607.26	104.3			-1			
Magnesjum	25000.0	25952.31	103.8			-1			<b></b>
Manganesc	750.0	818.66	109.2		[	-1	<del></del>		{
Mercury		010,00	10000			-1			
Nickel	2000.0	2156.47	107.8					ļ	
Potassium	25000.0	26852.23	107.4	<del></del>					
Selenium	10000.0	9837.91	98.4			-			
Silver	500.0	500.47	100.1_					<del></del>	<b></b>
Thallium	10000.0	9628.58	96 3						l
Vanadium	2500.0	7613.67	104.5			-			[
Zinc	-1000.0	1055.90	105.6			-			
Molybdenu	-5000.0	5322.80	106.5		·	-1			
Strontium		4883.39	97.7		[				
Tin	5000.0	5250.77	105.0						j
Lithlum -	5000.0							ļ	
		5319.48	106.4						
Uranium	10000.0	<u>_</u> 9690.68	_96.9_						
				<u> </u>				] <del></del>	
·						_1			<b></b> -
					]	]			
						_			
					l	(		J	

FORM VII - IN

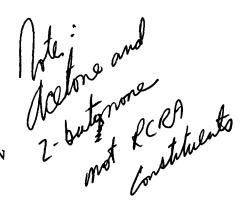
## 7 LABORATORY CONTROL SAMPLE

Lab Name:	LIONVILLE_	LABORATORY	Contract:	11830-1		
Lab Code:	LVI.T	Case No.: 01800	sas No.:	s	DG No.:	001003
Solid LCS	Source:	800				
Aqueous L	CS Source:	IVVI				

Analyte	Aque True	ous (ug/I Found	∑) %R	True	Sol: Found	id C	(mg/kg) Lin	mits	₹R
luminum			· · · · · · · · · · · · · · · · · · ·			Γ_			
Intimony_						_			<del></del>
rsenic				<u></u>		_		·	·
Barium						l_			
eryllium				l	l	_			
Cadmium						l		l	
Calcium				\					
Chromium					}	]			
Cobalt	-					_			
opper	**********					-			
ron				]		-		ļ <del></del>	
ron		<u> </u>				-			
lagnesium	[					[-			
langanese	•					] —			\
lercury_	5.0	5.14	102.8		·	-			
Vickel			102.8	<del></del>	<del></del>	<b> </b> —			
Potassium		<del></del>		·	<del></del>	l —			
Colassium				<del></del>		]—		}	
Selenium Silver							·	\	
sirver						<b>!</b> —		<del></del>	Í
hallium_				]		-			ļ
/anadium_						l —		·	
inc						<b>!</b>	<b></b>		
olybdenu trontium				l	ļ				
	}					<u> </u>			
`an [									
ithium						Ι			
ranium						-			
<b>`</b>						_			
						-			
	]					-			
<u> </u>				<del></del>		-			
<del></del>						[ –			
					} <del></del>	-			

FORM VII - IN





#### FAX COVER SHEET FOR FINAL DATA PACKAGE REPORTS

115000

RIN NUM	BER: 0120083
FROM:	SKIP NIELSEN
PHONE:	(303) 966-4289
	(303) 966-8345
ro:	M. Shafer
AX:	6678
HONE:	
UMBER	OF PAGES, INCLUDING COVER SHEET:
Please con	tact if the fax is not received in its entirety.
	(phone number)

#### NOTE:

This facsimile contains the results, in the Final Sample Data Package, for the analytes requested in this RIN. The package has been scheduled for verification or validation. Until verification or validation is completed the results must be considered preliminary. You will be forwarded a copy of the verification or validation report shortly after it is received by ASD. You should examine this report to determine if any qualifiers (flags) have been attached to the results. Flagged data may or may not be suitable for use as originally intended and should be evaluated for acceptability before use. If you have any questions please contact your Analytical Services Project Lead, do no contact the laboratory directly

Client: K-II RIN # 01S0083

LVI.#: 0106L203

**W.O.** #: 11830-001-001-9999-00

Date Received: 06-29-2001

#### GC/MS VOLATILE

One (1) water sample was collected on 06-27-2001

The sample and its associated QC samples were analyzed according to criteria set forth in Lionville Luboratory OPs based on SW 846 Method 8260A for low concentration Volatile target compounds on 07-09-2001.

The following is a summary of the QC results accompanying these sample results and a description of any problems encountered during their analyses

- 1 Non-target compounds were not detected in the sample
- 2 The sample was analyzed within 10-days from sample receipt.
- 3. The sample required a 5-fold dilution due to high levels of target compounds
- 4. One (1) of fifteen (15) surrogate recoveries was outside EPA QC limits The analysis of associated matrix spike duplicate fulfills the reanalysis requirement of sample 01S0083-002 001 MS.
- 5. All matrix spike recoveries were within EPA QC limits
- 6 All blank spike recoveries were within EPA QC limits.
- 7. The method blank contained the common laboratory contaminant Methylene Chloride at a level less than 2x the CRQL
- 8 Internal standard area and retention time criteria were met
- Manual integrations are performed according to OP L-QA-125 to produce quality data with the 9 utmost integrity. All manual integrations are required to be technically valid and properly documented Appropriate technical flags are defined in the Glossary ("Technical Flags For Manual Integration")

Michael/Tak President

Lionville Enboratory Incorporated

www.hymphymen.com.

The results presented in this report relate only to the ambyical testing and conditions of the say; i.e. at receipt and during storage. All pages of this report are integral parts of the analytical data. Therefore

this report should only be reproduced in its entirety of 1 2 6 pages

	しい いっぱん ひしょうしん ひんじ ひんじ しんしん	יבוורבא		CHAIN	OF CUSTO	X/SAMPI	CHAIN OF CUSTODY/SAMPLE ANALYSIS REOTIFIST		01S0083#0 <del>6</del> 2
	PFFTC /							} '	1
Sample				(ang	act/Requester		Telephone No.	Page 1	1 10
<b>21.</b>	200				Stapling Origin	Age and	Purkase Order/Charge Code	Charge Code	
Prove , Title	Title				Agbeok No. O.O.	KENCE	REDS0120 fee Chest No		
	omile I showing	in less	TWINT TO		1	220 UAN	Series - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale - Ale	1	
Pretocol	CHANGE LAUGHARDLY INC.	y IIIC		+		Sample	M	4533 2127	5547
	145 SP/	003		<b>-</b>	Related $COC$ (if any) $O_{i}$	0450085	# 00 /		
Are acid preserving the contract of the second preserving the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the	rossinica samirtie Hazaridskritariks Are end preserved estaplies DOT hazurdous per 40 CFR Part 136.3 Table 117 YES of NO Are other transportations and the same of the same and the same and the same between the same of the same and the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the	TENTARKS rebous per 40 CFR 1	Part 136.3 To	able III YES	or NO	SCREENING	G SPECIAL INSTRUCTIONS Hold Time		
:		Description of	2						
Bottle No	Obstorner	Мылк	Det	Time	Location	Container			Preservation
0150083-		2008	,		37 140 350 00 70	125 Marchity)	SECONDA PAGENCA		Packing
7 001.002	SICULSON		1/23/	0817	FLOOR TRENCH		SS038002 (PCB/Pest CLP-Solid) [Routine]	s	None 4 degrees C
001 003		SOLID	_	0826	BLDG. 865 RM 145 FLOOR TRENCH	125-ML/GM	SS08C006 (TCLP Metals 1311) [Routine]		None
240000			1					1	4 degrees C
001 004		O O		8150	BLDG. 865 RM. 145 FLOOR TRENCH	60-ML/G/1	SS08C010 (TCLP VOA 1311/8260) [Routine]		Name
L 01S0083-	_	anos			RING RES DM 145	125-ML/AG/1			4 degs C Wizhs
001 005	7		<b>&gt;</b>	1180	FLOOR TRENCH		SSUBCU11 (1CLP Semi VOA 1311/8270B) [Routine]		None Adeas C.w/Am
7 0150083- X 002 001 ·	01964203	AQUEOUS	Just	7126	BLDG. 865 RM. 145 FLOOR TRENCH	40-ML1G71	SS01B005 (VOA 8260-Water) [Routine]		None
		- 1	/o.	212	TOOL MENON			· · ·	4 degs C wizhs
002:002		Adueous			BLDG. 865 RM 145 FLOOR TRENCH	404A./G/I	SS01B005 (VOA 8280-Water) [Routine]		None
		21021104	1	$\int$					4 degs C wil
X 002 003	-	Audeous			BLDG 865 RM. 145 FLOOR TRENCH	40-ML/G/1	SS01B005 (VOA 8260-Water) [Routine]		None
Relpsqushed By		Date/Tane	Received By		A on Date/Line	Cine Relaces that Br	ik		degs C wizhs
15.8	11 600-01	10725	7130A		REF#7 0925			reservad by	DateTime
Reinquited By	*	25 Dierrae	Keep By	hound	A Churchmen - 4/21/6, 075	Dates True Referquished By 11 DPS	DetecTime	Received By	Date/Linse
A Separate of A	Churcham Lize 150	Descrime	12 C	Der	Дезел	Desoftime Refrescushed By	DateTime	Received By	Desertine
Redringuished By  (M) E	611	6-29-01 910C	Recoved By	house	Datame 6-19-01 9:00	Time Reimquahed By	DueTune	Received By:	Date inc
FINAL SAMPLE DISPOSITION		Disposal Method (e.g., returned to mistomer, dispose	овтек, бізрова	nd of per 🎳 procedure,	cedare, used on analytical process)	(Te	Disposed By	Date/Time	

Volatiles By GC/MS, Special List K-H RIN#01S0083

Report Date: 07/17/01 21.24 Nork Order: 11830001001 Fage Clent

Sample RFW#:		01S0083-002. 001 001		01S0083-002 001 001 MS	0150083-002, 001 001 MSD	VBLKGE 01LVX216-MB1	VBLKGE BS 01LVX216-MB1	
	ALLIA DF:	5 00		5.00			nAlek 1.00	
Uni	Units.	7/50		ng/r			DG/F	
1,2-Dichloroethane-d4	e-d4	94	*	8 66		\$ 66	3 96	
Toluene-d8	e-d8	101	=\o	101		97 %	160 %	
Bromofluorobenzene	zene	113	١- ا	117 × \$	115 %	114 %	114 %	
1.1. 电电子电子 医电子性 医二角性 医二角性 医二角性 医二角性 医二角性 医二角性 医二角性 医二角	Ä	n	£2===	_==========	2	[]==========[	b=====================================	[J========E]
Dichlorodifluoromethane		25	Þ	25 L		1 5 0	5 0	
Chloromethane		25	5	25 1		1 5 П	5 G	
Vinyl Chloride		25 1	n	25 t		2 0	5 U	
Bromomethane		25	ם	25 1		1 5 0	D S	
Chloroethane		25 (	5	25 (		1 5 0	5 4	
Trichlorofluoromethane		25	n	25 T		5 0	35 13	
1,1-Dichloroethene		25	Ð	73		25 G	% 08	
Carbon D_sulfide		25 (	ם	25 T		. S U	5 0	
		460		570		10 U	10 U	
Chloride		22	JB	68 2		Ø	8 5:	
Trans-1, 2-aichloroethene		25 (	b	25 T	7 25 7	5 0	5 T	
1,1-Dichloroethane		25	ь	25 T	J 25 U	1 S U	5 U	
C.s-1,2-dichloroethene		25 (	a	25 ï	J 25 U	T 5 U	S 0	
2,2-Dichloropropare		25 (	כו	25 C	) 25 J	1 5 U	5 U	
2-Bucanore		270		350	320	30 U	10 U	
Bromochloromethane		25 (	ם	25 L	J 25 U	1 5 0	5 0	
		25 1	ئ	25 t	J 25 U	ם כ	5 0	
1,1,1-Trichloroethane		25 1	ם	25 T	J 25 U	υ ς ι	2 D	
Carpon Tetraculoride		25	D	25 t	1 25 U	5 0	5 Q	
1,1-dichloropropene		35 (	ن	25 T	7 25 U	T 5 T	р 2	
		25 1	Ь	101 %	% SCT 3	C3	106 %	
1,2-Dichloroethane		25 (	b	25 U	1 25 C	D 5	5 C	
Trichloroethene		25 1	ם	9. V.	101 \$	S	101 %	
1,2-D:caloropropane		25 :	ם	25 ਹ	J 25 U	T 55 CF	(C)	
Dipromomethane		25 [	b	25 U	7 25 J	5 U	5 17	
Broacdich_cromethane		25 (	ь	25 U	1 25 0	55 3	5 1	
c.s-1,3-Dichloropropene		25 (	ь	25 ਹ	J 25 U	ш ш	5 0	
4-Methyl-2-pentanone		20 (	b	50 U	50 E	U 01	10 U	
		25 (	5	101	105 %	5 0	1.07 %	
*= Cutside of 3PA CLP OC limits	rs.							

RFW Barch Number 01061203

티	Client K-H	K-H RIN#0150083	0083		Nork Order	er 11836001001	01001	Page	13	
Cust ID 0	0180083-002		0180083-002		0130083-002.	VBLKGE		VBLKGE BS		
	100		100		100					
RFW#:	100		001 MS		OSM TOO	01LVX216-MBI	<b>.</b> E	01LVX216-MB1	ĬĠ.	_
Trans-1, 3-D-chloropropene	25	ם	25	þ	25 U		D	5		
1,1,2-Trichloroethane	25	D	25	Þ	25 U		D 19	5		
Tetrachloroethene	25	D	25	ם	25 U		5	S.	· •	_
1,3-Dichloropropane	25	n	52	b	25 U	-,	5	5	<u> </u>	
2-Hexanone	33	ט	39	<b>ب</b>	4.5 J	ì	0 0	10	ם -	_
Dibromochlorometnane	25	D	25	Ω	25 U	•	ם	ĸ		<b>.</b>
1,2-Dibromoethane	25	D	25	Þ	25 G	-	D	S	<b>□</b>	_
Calorobenzene	25	Ω	104	c/•	109 %		מ	111	4/0	
I,1,1,2-Tetrachloroethane	25	D	52	b	25 U	5,	D	ហ	₽	<b></b>
Rthylbenzene	25	Ω	25	b	25 U	-,	5	5	ם	
1,3- and 1,4-Xylene	25	Ω	25	Þ	25 U	-,	5	Ŋ	₽	_
1,2-Xylene	25	Ω	25	Þ	25 D	•	<b>=</b>	Į,	D	_
Xylenes (total)	25	כו	25	þ	25 U	•	<u>-</u>	Ŋ	ם	,
Styrene	25	Þ	25	b	25 U	•,	Þ	K	D	
Вгопобоги	25	ם	22	b	25 U	•	ם	S	ຍ	
Isopropylbenzene	25	Þ	22	b	25 U	4,	5	C)	ם	,
Bromobenzene	25	D	25	n	25 U	4,	<b>ن</b> 	ហ	Þ	
1,2,3-Trichloropropare	25	D	25	ם	25 J	υ,	<b>5</b>	2	Þ	_
1,1,2,2-Tetrachloroethane	25	u	25	=	25 U	Ψ,	D	5	D	
N-propy_benzene	25	מ	25	b	25 U	•,	נז	5	Ö	
2-Chlorotoluene	25	ם	52	5	25 U	•	ם	S	ם	
4-Chlorotoluene	25	c	25	ם	25 U	,	5	5	D	
1,3,5-Trimethylbenzene	25	Þ	22	5	25 U	4)	<b>D</b>	5	ם	
Tert-butylbenzene	25	מ	25	Þ	25 U	uı	Þ	5	D	
1,2,Trimethylbenzene	25	Ω	52	D	25 U	υ,	D	ın	Þ	
Sec-buty?benzene	25	Ω	22	ł a	25 U	<b>u</b> ,	ם	ß	Þ	
1,3-Dichlorobenzene	25	ם	25	ь	25 U	Δ1	ß	r2	D	
1,4-Dichlorobenzene	25	D	25	n	25 D	¥1	Þ	S	D	
4-Isopropyltoluene	25	ಬ	25	n	25 J	u)	Þ	ស	D	
I, 2-Dichlorobenzene	25	ם	25	_	25 G	v.	Þ	'n	נו	
N-butylbenzene	25	n		ם	25 U	LO.	כו	'n	a	
1,2-Dibrono-3-chicropropane	25	Ω	25	<u>,</u>	25 U	ιη	כו	ίΩ	n	
1,2,4-Trichlorobenzene	25	D	25 1	_	25 U	ហេ	D	S	מ	
Kexachloroburadiene	25	נו	25	_	25 T	LT.	D	'n	Ð	
Naphthalene	25	ם	25	~	25 U	רט	Þ	U)	٦	
1,2,3-Tricilorobenzene		n	25	144	25 C	Ĭ.	Þ	ស	ח	
1,1,2-Trichlorotrificorothane	25	IJ	25	ь	25 U	ις,	b	S	Ω	
*= Ourside of E2A CLP QC limits									ı	

## VOLATILE METHOD BLANK SUMMARY

Lab Name Lionville Laboratory Inc Contract 11830-001-001-9999-00

Lab Code, LVLI Case No .

SAS No..

SDG No 06L203

Lab File ID. X070904

Lab Sample ID: 01LVX216-MB1

Date Analyzed

07/09/1

Time Analyzed

1120

Matrix (soil/water) WATER

Level (low/med) LOW

Instrument ID: 5970X

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD

	EPA	LAB	LAB	TIME
	SAMPLE NO	SAMPLE ID	FILE ID	ANALYZED
01	0180083-002 001	0106L203-001	X070906	1232
02	VBLKCEBS	01LVX216-MB1S	X070907	1307
03	01S0083-002,001MS	01061203-0018	X070908	1344
04	01S0083-002 001MSD	0106L203-001T	X070909	1420
0.5		0_0	1.000	1
06		780		
07				
08	1 %			
09				
10	<u> </u>			
11				
12				
13				
1,4	)			
15				
16				
17				
18	,		<b></b>	
19				·
20				
21				
22				
23				·
24				
25			\	
26				
27				<del>  </del>
				<del></del>
28				
29				
30		,	ļ	I

COMMENTS

page 1 of 1

FORM IV VOA

MAC-SW846HP-

#### 1A VOLATILE ORGANICS ANALYSIS SHEET

MMA	SAMPLE	<b>NT</b>
H U L	~ / \   V   D	NI.

0150083-002	001	
l		

Lab Name Lionville Labs, Inc. Contract	11830001001	
Lab Code Lionvi Case No	SAS No SDG No	
Matrix (soil/water) WATER	Lab Sample ID 0106L203-001	
Sample wt/vol: 5.00 (g/mL) ML	Lab File ID x070906	
Level (low/med) LOW	Dato Received. 06/29/01	
i Moisture not dec	Date Analyzed 07/09/01	
Column. (pack/cap) CAP	Dilution Factor: 5 00	

CONCENTRATION UNITS .

CAS NO. COMPOUND (ug/L or ug/Kg) UG/L 75-/1-8-----Dichlorodifluoromethanc 25 וז ! 74-87-3-----Chloromothane 25 U 75-01-4-----Vinyl Chloride 25 U 25 שו 75-00-3-----Chloroethane 25 U /5-69-4----Trichlorofluoromethane 25 טו 75-35-4-----1,1-Dichloroethone\_\_\_ 25 U 75-15-0-----Carbon Disulfide\_\_\_\_ 25 ט 67-64-1-----Acetone 460 75-09-2----Methylene Chloride 22 JB 156-60-5-----Trans-1,2-dichlorocthene 25 U /5-34-3-----1,1-Dichloroethane 25 U 156-59-2-----Cis-1,2-dichloroethene 25 u 590-20-7----2,2-Dichloropiopane 25 U 78-93-3-----2-Butanone 270 74-97-5-----Bromochloromethano 25 U 67-66-3-----Chloroform 25 U 71-55-6-----1,1,1-Trichloroethane 25 Ũ 56-23-5-----Carbon Tetrachloride 25 ט 25 563-58-6-----1,1-dichloropropene\_ U 71-43-2-----Bonzene 25 U 107-06-2-----1,2-Dichloroethane\_ 25 U 79-01-G-----Trichloroethene 25 Ü 78-87-5----1,2-Dichloropropane 25 U 74-95-3-----Dibromomethane\_\_\_\_\_ 25 U 75-27-4-----Bromodichloromethane 25 U 10061-01-5----cis-1,3-Dichloropropene\_ 25 U 108-10-1-----4-Methyl-2-pentanone\_\_\_\_ 50 U 108-88-3-----Toluene 25 ע 10061-02-6----Trans-1,3-Dichloropropene\_ 25 U 79-00-5----1,1,2-Trichlorgethane\_\_\_\_ 25 ט 127-18-4-----Tetrachloroothene 25 ľΨ 142-28-9-----1,3-Dichloropropage 25 U 591-78-6----2-Hexanone\_\_\_\_\_ 33 lЈ

FORM 1 V-1

1/87 Rev.



CAS NO.

NE ASD

#### 1B VOLATINE ORGANICS ANALYSIS SHEET

COMPOUND

| 99-87-6-----4-Isopropyltoluene\_\_\_\_ | 95-50-1-----1,2-Dichlorobenzene\_\_

96-12-8-----1,2-Dibromo-3-chloropropane\_

120-82-1----1,2,4-Trichlorobenzene\_\_\_\_

87-68-3-----Hexachlorobutadiene

87-G1-6-----1,2,3-Trichlorobenzene\_

104-51-8-----N-butylbenzone\_\_\_\_

91-20-3-----Naphthalene\_\_

EPA SAMPLE NO

0150083-002	001	
1		

Inb Name: <u>Lucrville Labs</u> , <u>Inc.</u> Contract, <u>11830</u>	001003	
Lab Code Lionva Case No	SAS No	SDG No :
Matrix, (soil/water) WATER	Lab Sample ID.	0106L203-001
Sample wt/vol $5.00$ (g/mL) $MI$ .	Lab Filo ID;	x070906
Level (low/med) <u>LOW</u>	Date Received	06/29/01
% Moisture not dec	Date Analyzed	07/09/01
Column (pack/cap) CAP	Dilution Factor	5 00

CONCENTRATION UNITS, (ug/L or ug/Kg) UG/L

<b>!</b>		3 1	
124-48-1Dibromochloromethane	25	ן טן	
106-93-41,2-Dibromoethana	25	ן טן	
108-90-7Chlorobenzone	25	וֹ טוֹ	
630-20-61,1,1,2-Tetrachloroethane	25	ו טו	
100-41-4Ethylbenzene	25	יט	
108-38-31,3- and 1,4-Xylene	25	iu i	
95-47-61,2-Xylene	25	ju j	į
1330-20-7Xylenes (total)	25	ן טן	ĺ
100-42-5Styrene	25	lu i	
75-25-2Bromoform	25	ן ט	
98-82-8Isopropylbcnzene	25	ן טוֹ	ĺ
108-86-1Bromobenzene	25	ן טן	
96-18-41,2,3-Trichloropropane	25	U	
79-34-51,1,2,2-Tetrachlorocthane	25	ן ט	
103-65-1N-propylbenzone	25	ן מן	
95-49-82-Chlorotolueng	25	i u i	ĺ
106-43-44-Chlorotoluene	25	ו טו	
108-67-81,3,5-Trimethylbenzeno	25	i vi	
98-06-6Tert-butylbenzone	25	ו טו	
95-63-61,2,4-Trimethylbenzene	25	U I	1
135-98-8Sec-butylbenzone	25	ן ט	
541-73-11,3-Dichlorobenzene	25	ן טן	
106-46-71,4-Dichlorobenzenc	25	ט ו	

FORM 1 V-2

1/87 Rev

U

שו

U

U

U

U

Ü

U

25

25

25

25

25

25

25



Lab Code Lionvi Case No

Sample wt/vol 500 (g/mL) MI

Matrix (soil/water) WATER

Level (low/mcd) LOW

% Moisture, not dec. \_\_\_\_\_

	10		
VOLATILE	ORGANICS	NALYSIS	SHEET

Lub Namo Lionville Labs, Inc. Contract, 11830001001

	epa sample no	
001001	150083-002 001	
SAS No	SDG No :	
Lab Sample ID	0106L203-001	
Lab File ID	×070906	
Date Roceived	06/29/01	
Date Analyzed.	07/09/01	
Dilution Factor	5.00	
NTRATION UNITS or ug/kg) <u>UG/I.</u>		
	<del>~~~</del> .	

CONCENTRATION (

CAS NO.

Column (pack/cap) CAP

COMPOUND

(ug/L or ug/Kg)

76-13-1----1,1,2-Trichlorotrifluoroethane 25

FORM 1 V-3

1/87 Rev.

1E

# VOLATILE ORGANICS ANALYSIS SHEET TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE	NO.
0180083-002	001

	0180083-002 001
Lab Name Lionville Labs, The Contract	
Lab Code Lionvi Case No	SAS No · SDG No ;
Matrix, (soil/water) WATER	Lab Sample ID 0106L203-001
Sample wt/vol 500 (g/mL) MI	Lab File ID: x070906
Level (low/med) <u>LOW</u>	Date Received: 06/29/01
% Moisture not dec	Date Analyzed 07/09/01
Column, (pack/cap) CNP	Dilution Factor: 5.00
Number TICs found0	CONCENTRATION UNITS (ug/L or ug/Kg) UG/L

CAS NUMBER COMPOUND NAME RT EST CONC Q

1/8

1/87 Rev

OS&IH PM CBDPP, 081000, Appendix 9, Revision 1,

Description of the item or Lot Ballasts from Stainless Steel Welding Glovebox, Building 865 Room 14

#### BERYLLIUM RELEASE SCREEN (BRS) FORM (Page 1 of 2)

NOTE Attach co	mpleted BRS Form to the Material Transfer			
PART I	SENDER/CUSTODIAN			
Description of the item or Lot Nine ballasts that came from the Stainless Steel Welding Glovebox located in Building 865				
Room 145  l Are items in th	e Beryllium Shop (Bldg 444) or known to have been used in beryllium opera	ations?	<b>₩</b> No	
If yes, con	nplete Part III of this form	<b>□</b> 103	2 110	
	room on the "RFETS Rooms with Present Beryllium Contamination" IH/berylliu htm)	<b>¥</b> Yes	□ No	
If yes, com	nplete Part III of this form	Z. 1 C2	<b>110</b>	
3 Are items in a	beryllium building, but not on the "RFETS Rooms with Present Beryllium Co	ontamination	n" list? ♣ No	
If yes, com	plete Part II of this form	<b>—</b> 103	- 110	
If the answers to que further action	estions 1, 2 and 3 above are all "No", sign below designating that all items ca	an be free re	leased with no	
	ow, I acknowledge answers provided in Part I to be true and correct ow, I acknowledge items to be dee-releasable			
Sender/Custodian	Ex	t <u><b>6/8</b>/</u> P	ager <u>5477</u>	
Sender/Custodian  PART II	APPROVAL FOR TRANSFER/SHIPMENT WITHOUT SAMPI		ager <u>\$\$77</u>	
PART II  1) Have the specific	APPROVAL FOR TRANSFER/SHIPMENT WITHOUT SAMPI fied items ever been in a room on the "RFETS Rooms with Present Beryllium the beryllium could have come in contact with the items or have any other potential."	LING n Contamina	ition" list in a	
PART II  1) Have the specific manner in which	APPROVAL FOR TRANSFER/SHIPMENT WITHOUT SAMPI fied items ever been in a room on the "RFETS Rooms with Present Beryllium the beryllium could have come in contact with the items or have any other potential."	LING n Contamina	ition" list in a	
PART II  1) Have the specific manner in which contamination?  □ Yes  If yes, com	APPROVAL FOR TRANSFER/SHIPMENT WITHOUT SAMPI fied items ever been in a room on the "RFETS Rooms with Present Beryllium the beryllium could have come in contact with the items or have any other potential."	LING  n Contamina ential for be	ition" list in a ryllium	
PART II  1) Have the specific manner in which contamination?  □ Yes  If yes, complete in this form	APPROVAL FOR TRANSFER/SHIPMENT WITHOUT SAMPIfied items ever been in a room on the "RFETS Rooms with Present Beryllium ch beryllium could have come in contact with the items or have any other potential."  No splete Part III of this form	LING  n Contamina ential for be	ition" list in a ryllium	
PART II  1) Have the specific manner in which contamination?  1 Yes  If yes, compliant in the form  By signing below, I	APPROVAL FOR TRANSFER/SHIPMENT WITHOUT SAMPI fied items ever been in a room on the "RFETS Rooms with Present Beryllium the beryllium could have come in contact with the items or have any other potential."  No implete Part III of this form items the historical knowledge that the items have no potential for beryllium	LING  n Contamina ential for be  contaminate  orrect	ition" list in a ryllium on and attach to	
PART II  1) Have the specific manner in which contamination?  1 Yes  If yes, complete in this form  By signing below, If sender/Custodian  I have discussed with contamination scene.	APPROVAL FOR TRANSFER/SHIPMENT WITHOUT SAMPI fied items ever been in a room on the "RFETS Rooms with Present Beryllium th beryllium could have come in contact with the items or have any other potential."  No implete Part III of this form imment the historical knowledge that the items have no potential for beryllium certify the information provided in Part I and II of the BRS to be true and contact with the information provided in Part I and II of the BRS to be true and contact with the information provided in Part I and II of the BRS to be true and contact with the information provided in Part I and II of the BRS to be true and contact with the information provided in Part I and II of the BRS to be true and contact with the information provided in Part I and II of the BRS to be true and contact with the items or have any other potential for beryllium the information provided in Part I and II of the BRS to be true and contact with the items or have any other potential for beryllium the information provided in Part I and II of the BRS to be true and contact with the items have no potential for beryllium the information provided in Part I and II of the BRS to be true and contact with the items have no potential for beryllium the information provided in Part I and II of the BRS to be true and contact with the items have no potential for beryllium the information provided in Part I and II of the BRS to be true and contact with the items have no potential for beryllium the information provided in Part I and II of the BRS to be true and contact with the items have no potential for beryllium the information provided in Part I and II of the BRS to be true and contact with the items and the information provided in Part I and II of the BRS to be true and contact with the items and the information provided in Part I and II of the BRS to be true and the information the information the information the information the information the information the information the information the information the information the information t	contaminate  prect Pager  nation list, p	otion" list in a ryllium on and attach to	
PART II  1) Have the specific manner in which contamination?  Yes  If yes, compliantly fine, documentation below, I sender/Custodian  I have discussed with contamination scend documentation states.	APPROVAL FOR TRANSFER/SHIPMENT WITHOUT SAMPLE field items ever been in a room on the "RFETS Rooms with Present Beryllium chip beryllium could have come in contact with the items or have any other potential."  No  Inplete Part III of this form imment the historical knowledge that the items have no potential for beryllium certify the information provided in Part I and II of the BRS to be true and contact with the Sender/Custodian the RFETS Rooms with Present Beryllium Contaminations for beryllium contamination, and potential hazards associated with beryllium contamination, and potential hazards associated with beryllium contamination, and potential hazards associated with beryllium contamination.	contaminate contaminate rect Pager nation list, p	otential ure The attached	

OS&IH PM CBDPP, 08100	0, Appendix 9, R	evision 1,			<b>'</b> /~.
OS&IH PM CBDPP, 08100 Description of the item or Lot  Building Manager N/A	Ballasts from Stainl	ess Steel Welding	Glovebox, Buildii	ng 865 Room 145	16/1/1
Building Manager N/A	Emp No	Date	Ext	Pager	11/4/

#### **Property History/Sampling Information**

Building 865 has historically housed Beryllium Operations and the entire facility is currently classified as a Beryllium Contaminated Area Room 145 is on the "RFETS Rooms with Present Beryllium Contamination" list, even though the Stainless Steel Welding Glovebox that the ballasts were removed from was never used in beryllium operations. The ballasts were housed under an enclosed light housing on top of the glovebox and were wet wiped. The ballasts are sealed units where there would be no concern of internal beryllium contamination. There is a total of nine ballasts removed from the area.

A beryllium surface wipe sample was collected on each of the nine ballasts None of the samples had detectable levels of beryllium upon the wipe samples (see attached survey)

111

ORIGIN! 1 OS&IH PM CBDPP, 081000, Appendix 9, Revision 1,

Description of the item or Lot Ballasts from Stainless Steel Welding Glovebox, Building 865 Room 145

#### BERYLLIUM RELEASE SCREEN (BRS) FORM (Page 2 of 2)

PART III	DISAPPROVAL FOR SHIPMENT WITHOUT SAMPLING							
	d find that the items cannot be released based on the above information and require sampling or Following the CBDPP Equipment Release" or disposal according the CBDPP							
Sender/Custodian	Ext <u>6/84</u> Pager <u>5977</u>							
Complete Part IV								
PART IV	APPROVAL FOR SHIPMENT BASED ON PROCESSING ALTERNATIVES OR SAMPLING RESULTS							
Attach the description and justification of the lot and the results of sampling to this form and include this form with items when transferring items to PU&D								
	at the items have been processed following the OS&IHPM Chapter 28, CBDPP and sampled ethodology and have met the beryllium free release criteria							
Sender/Custodian	Ext 6/81 Pager 5977							
I have reviewed the results of sampling in accordance with OS&IHPM Chapter 28 and certify that the items meet the Beryllium free release criteria								
Bldg Industrial Hygien	Date 3/26/01 Ext 2406 Pager 3218							
PART V DIS	APPROVAL FOR SHIPMENT BASED ON SAMPLING RESULTS							
Attach results of sampling to	Attach results of sampling to this form and include form with items to ensure proper disposal as waste							
I have reviewed the results of Beryllium free release criteria	sampling in accordance with OS&IHPM Chapter 28 and certify that the items DO NOT meet the							
Bldg Industrial Hygienist	N/A Emp No Date Ext Pager							



+				ng/Alter	107	107	1.0 >		· -	 0 (	i y	0 ·	 0 (	O 0				0,	P/(	5/N	Shaded area = 100cm2 -	<b>V</b>
Page 1 of		Johnson	フ															## (1) (1) (1) (1) (1) (1) (1) (1) (1) (1)	The Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Co	And the second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second s	, = gate habed	סוומחבת מובמ
e Log	tt)																				A Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Comm	
echnology Site Beryllium Wipe Sample Log	Sampler (print)	Employee #								MECHANIST AND AND SERVICE STATE OF THE SERVICE STATE OF THE SERVICE STATE OF THE SERVICE STATE OF THE SERVICE STATE OF THE SERVICE STATE OF THE SERVICE STATE OF THE SERVICE STATE OF THE SERVICE STATE OF THE SERVICE STATE OF THE SERVICE STATE OF THE SERVICE STATE OF THE SERVICE STATE OF THE SERVICE STATE OF THE SERVICE STATE OF THE SERVICE STATE OF THE SERVICE STATE OF THE SERVICE STATE OF THE SERVICE STATE OF THE SERVICE STATE OF THE SERVICE STATE OF THE SERVICE STATE OF THE SERVICE STATE OF THE SERVICE STATE OF THE SERVICE STATE OF THE SERVICE STATE OF THE SERVICE STATE OF THE SERVICE STATE OF THE SERVICE STATE OF THE SERVICE STATE OF THE SERVICE STATE OF THE SERVICE STATE OF THE SERVICE STATE OF THE SERVICE STATE OF THE SERVICE STATE OF THE SERVICE STATE OF THE SERVICE STATE OF THE SERVICE STATE OF THE SERVICE STATE OF THE SERVICE STATE OF THE SERVICE STATE OF THE SERVICE STATE OF THE SERVICE STATE OF THE SERVICE STATE OF THE SERVICE STATE OF THE SERVICE STATE OF THE SERVICE STATE OF THE SERVICE STATE OF THE SERVICE STATE OF THE SERVICE STATE OF THE SERVICE STATE OF THE SERVICE STATE OF THE SERVICE STATE OF THE SERVICE STATE OF THE SERVICE STATE OF THE SERVICE STATE OF THE SERVICE STATE OF THE SERVICE STATE OF THE SERVICE STATE OF THE SERVICE STATE OF THE SERVICE STATE OF THE SERVICE STATE OF THE SERVICE STATE OF THE SERVICE STATE OF THE SERVICE STATE OF THE SERVICE STATE OF THE SERVICE STATE OF THE SERVICE STATE OF THE SERVICE STATE OF THE SERVICE STATE OF THE SERVICE STATE OF THE SERVICE STATE OF THE SERVICE STATE OF THE SERVICE STATE OF THE SERVICE STATE OF THE SERVICE STATE OF THE SERVICE STATE OF THE SERVICE STATE OF THE SERVICE STATE OF THE SERVICE STATE OF THE SERVICE STATE OF THE SERVICE STATE OF THE SERVICE STATE OF THE SERVICE STATE OF THE SERVICE STATE OF THE SERVICE STATE OF THE SERVICE STATE OF THE SERVICE STATE OF THE SERVICE STATE OF THE SERVICE STATE OF THE SERVICE STATE OF THE SERVICE STATE OF THE SERVICE STATE OF THE SERVICE STATE OF THE SERVICE STATE OF THE SERVICE STATE OF THE SERVICE STAT											7	निक्रिकेट व
echnology Site Bei		Manuelle.								September 1		1	8	0	The state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the s	mar	s ma	S AMC		remo	16001	# SIASY & Date
Rocky Flats Environmental T	RIN#	0100623	WCP# /44/10# 010		Ballast #1	Polloc+ #2	1	Dollast #0	Ballast #4	Ballast #5	Ballast #6	Ballast #	Ballast #8	Ballast #	BLANK	Light bulbs	Legus beelles	Salva enter		2	11 00	Empl
Rockv		-				(1-			~	12										NOTE All of this equipment	Welding Glovebox	Checked By (print/sign) MSRule (M) Refer
	Sample Prefix	12001-01	Date - IH#	Room	17.16	9 :	٩	40	146	146	146	146	ग्रा	74,0	\	140	140	9		TE W	Meldung	(print/sign)
	ίŠ	5	Bidg -	Sample Serience #		ا و	_	ŏ.	5	20	12	22	23	24	25	26	27	28		707		Checked By

£

<u>)</u>



#### **COVER PAGE**

March 23, 2001

Johns Manville Corporation 10100 W Ute Avenue (80127) P O Box 625005 Littleton, CO 80162-5005 303 978 2000

Rocky Flats Environmental Technology Site Ms Shelly Johnsen PO Box 464, Building 881 Golden, CO 80402-0464

Laboratory Report ID

01032208

**Laboratory Name Laboratory Code** 

JMTC IH Analytical Laboratory

**JMANS** 

**Subcontract Number** RIN

800188SX6

Requestor

01D0623

LeeAnn Holwager

P O /Charge Code

EEC50021

Dear Ms Johnsen

The Johns Manville Technical Center (JMTC) has performed the following analytical services as requested. The results are calculated based upon the information supplied on the submission form. All laboratory data has been filed and are available upon request The JMTC IH Analytical Laboratory is accredited by the American Industrial Hygiene Association (AIHA) in the industrial hygiene program (Certificate No 056) and participates in the AIHA ELPAT program If you have any questions, please call (303) 978-2584

#### Scope of Work

Requested Analysis	Bottle Number(s)	Customer Number(s)	Laboratory ID Number	Line Item Code	Sample Matrix
Beryllium	01D0623-001 001	865-03212001-01-16	01032208-001	NR01A001	WIPE
Beryllium	01D0623-002 001	865-03212001-01-17	01032208-002	NR01A001	WIPE
Beryllium	01D0623-003 001	865-03212001-01-18	01032208-003	NR01A001	WIPE
Beryllium	01D0623-004 001	865-03212001-01-19	01032208-004	NR01A001	WIPE
Beryllium	01D0623-005 001	865-03212001-01-20	01032208-005	NR01A001	WIPE
Beryllium	01D0623-006 001	865-03212001-01-21	01032208-006	NR01A001	WIPE
Beryllium	01D0623-007 001	865-03212001-01-22	01032208-007	NR01A001	WIPE
Beryllium	01D0623-008 001	865-03212001-01-23	01032208-008	NR01A001	WIPE
Beryllium	01D0623-009 001	865-03212001-01-24	01032208-009	NR01A001	WIPE
Beryllium	01D0623-010 001	865-03212001-01-25	01032208-010	NR01A001	WIPE
Beryllium	01D0623-011 001	865-03212001-01-26	01032208-011	NR01A001	WIPE
Beryllium	01D0623-012 001	865-03212001-01-27	01032208-012	NR01A001	WIPE
Beryllium	01D0623-013 001	865-03212001-01-28	01032208-013	NR01A001	WIPE

Comments. No problem were encountered with sample receiving and sample analysis

I certify that this sample data package is in compliance with SOW requirements, both technically and for completeness, other than the conditions detailed above Release of the data contained in this hard-copy sample package and the computer-readable EDD, as applicable, submitted on diskette or by modem, has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature

Scott A Steiner Industrial Hygiene Project Manager Date



March 23, 2001

Laboratory Report ID 01032208

Laboratory Name

JMTC IH Analytical Laboratory

**Laboratory Code** 

**JMANS** 800188SX6

Subcontract Number RIN

01D0623

Requestor

LeeAnn Holwager

P O /Charge Code

EEC50021

## **QUICK RESULTS SUMMARY**

Line Item Code	NR01A001	Reporting Limit	01 μg		
Sample Matrix	WIPE	Date Received	03/22/01		
Analytical Method	OSHA ID-125G	Date Analyzed	03/23/01		

Customer Number	Laboratory ID Number	Requested Analysis	C Backup	ONCENTRAT	TION Total	Т	Q	Constituent ID
865-03212001-01-16	01032208-001	Beryllium			< 01 μg	TR1	U	7440-41-7
865-03212001-01-17	01032208-002	Beryllium			< 01 μg	TR1	U	7440-41-7
865-03212001-01-18	01032208-003	Beryllium			< 01 μg	TRI	U	7440-41-7
865-03212001-01-19	01032208-004	Beryllium			< 01 μg	TR1	U	7440-41-7
865-03212001-01-20	01032208-005	Beryllium			< 01 μg	TR1	U	7440-41-7
865-03212001-01-21	01032208-006	Beryllium			< 01 μg	TR1	U	7440-41-7
865-03212001-01-22	01032208-007	Beryllium			< 01 μg	TR1	ט	7440-41-7
865-03212001-01-23	01032208-008	Beryllium			< 01 μg	TR1	Ŭ	7440-41-7
865-03212001-01-24	01032208-009	Beryllium			< 01 μg	TR1	Ū	7440-41-7
865-03212001-01-25	01032208-010	Beryllium			< 01 μg	TR1	U	7440-41-7
865-03212001-01-26	01032208-011	Beryllium			< 01 μg	TR1	Ü	7440-41-7
865-03212001-01-27	01032208-012	Beryllium			< 01 μg	TR1	U	7440-41-7
865-03212001-01-28	01032208-013	Beryllıum			< 01 μg	TRI	U	7440-41-7



Rocky Flats Environmental Technology Site

Golden, CO 80402-0464

RFP F 3791 32 (7/95) Formerly RF-47530

Safety and Hygiene Chain of Custody Record and Analysis Request

♂ Number Time/Date Time/Date Time/Date Time/Date ☐ Unbroken Page 2 Velicia Farte 11 14 1 2 411 REMARKS Received by Received by Received by Received by Green - Sample Custodian Blue - Onginator Condition of Seal Seal# (Release #) Comments | 24 Alabe Date Signature Personal Area Bulk Relinquished by Relinquished by Relinquished by Relinquished by Bldg/Ext Industrial Hygiene Sample MEDIA Asbestos Samples Other Analysis Request □ ~ **§** Rush SAMPLE TIME/ Yellow - Lab Copy □ 2 § Time/Date Time/Date Time/Date Time/Date Standard Service VOLUME Standard Service Iters White - Return to Onginator Title ANALYZE FOR Received by Received by Received by Received by Report and Billing Instruction P O #/Release Report To Verbal To Fax To Bill To Relinduished by Relinquished by Relinquished by Relinquished by SAMPLE NUMBER BIdg/Y/M/D/P#/S# Name of Originator Lab 00000 Kaiser-Hill DynCorp WSI **RMRS** SSOC

		INSTRU	JMENT DAT	A		1					
Mfg	Eberline	Mfg	Eberline	Mfg	NE	Survey Typ	pe Al	pha, Beta	contamination		
Model	SAC-4	Model	SAC-4	Model	Electra	Building	865				
Senal #	809	Semal #	818	Semal#	1393	Location	Room 1	46			
Cal Due	8-19-01	Cal Due	6-27-01	Cal Due	6-14-01	Purpose	REN su	rvey for l	Be smears		_
Bkg	0 2 cpm α	Bkg	0 4 cpm α	Bkg	2 0 cpm α						
Eff	33 3 % α	Eff	33 3 % α	Eff	20 7 % α	RWP#	N/A				
MDA	20 dpm α	MDA	20 dpm α	MDA	55 dpm α						
Mfg	Eberline	Mfg	Eberline	Mfg	NE	Date	3-22-	-01	Time	0	750
Model	BC-4	Model	BC-4	Model	Electra	1 -					
Serial #	961	Serial #	775	Senal#	1393	1					
Cal Due	12-28-01	Cal Due	12-1-01	Cal Due	6-14-01	RC1 Nan	ne	•	Signature		Employee #
Bkg	43 6 cpm β	Bkg	40 4 cpm β	Bkg	654 cpm β						
Eff	25 % β	Eff	25 % β	Eff	34 8 % β	N/A		/	N/A	1	N/A
MDA	200 dpm β	MDA	200 dpm β	MDA	437 dpm β	RCT Nan	ne		Signature		Employee #

Comments: Survey pts (14) and (15) were taken on the external surface of the plastic transport bag Isotope of concern for building 865 is depleted uranium (U-238)

		SURVI	EY RESULTS	2	OP'		
			<u>ALPHA</u>		Ur	<u>BETA</u>	,
SWIPE	LOCATION	SWIPE	DIRECT	WIPE	SWIPE	DIRECT	WIPE
#	Be smear # denoted below	DPM/100CM2	DPM/100CM2	DPM/WIPE	DPM/100CM2	DPM/100CM2	DPM/WIPE
1	865-03212001-01-16	<20	N/A	N/A	<200	N/A	N/A
2	865-03212001-01-17	<20	N/A	N/A	<200	N/A	N/A
3	865-03212001-01-18	<20	N/A	N/A	<200	N/A	N/A
4	865-03212001-01-19	<20	N/A	N/A	<200	N/A	N/A
5	865-03212001-01-20	<20	N/A	N/A	<200	N/A	N/A
6	865-03212001-01-21	<20	N/A_	N/A	<200	N/A	N/A
7	865-03212001-01-22	<20	N/A	N/A	<200	N/A	N/A
8	865-03212001-01-23	<20	N/A	N/A	<200	N/A	N/A
9	865-03212001-01-24	<20	N/A	N/A	<200	N/A	N/A
10	865-03212001-01-25	<20	N/A_	N/A	<200	N/A	N/A
11	865-03212001-01-26	<20	N/A	N/A	<200	N/A	N/A
12	865-03212001-01-27	<20	N/A	N/A	<200	N/A	N/A
13	865-03212001-01-28	<20	N/A	N/A	<200	N/A	N/A
14	Front of transport bag	<20	<72	N/A	<200	<401	N/A
15	Back of transport bag	<20	<72	N/A	<200	<401	N/A
16	N/A	N/A	N/A	N/A	N/A	N/A	N/A
17	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Date Revi	newed $3/22/\varrho_I$ RS Super	rvision					
			Print Name		Signature		Emp#

# RELEASE EVALUATION FORM Page 1 of 3

Release Evaluation No :010124 T130C-002 EXTENDED YES EXPIRES:DEC	EMBER 31, 2001 Charge No :
PART I SENDER/CUSTODIAN ACKNOWLEDGMENT	
Description of Property/Waste/Sample To Be Released/Transferred LAPEL AIR S	AMPLES AND SWIPES .
Current Location. BUILDING 881, 865, 883, 444, 440, 460, 886, 664, 447, 448, 9 779, 371, 771, 551, 662, 910, 709, 995, 569,707,711,125,119,128,127, T452A,T4: 442L, 442W,428,428B	91, 906, 774, 569, 750 Pad, 904 pad, 374, 788, 52B, T452C, T452D, T452F, 452, 443, 441, T441A,
Destination JOHN MANVILLE TECHNICAL CENTER, PO BOX 625005 LIT	ITLETON COLORADO 80162-5005
New Recipient/Custodian: JOHN MANVILLE TECHNICAL CENTER, PO BC 5005	OX 625005 LITTLETON COLORADO 80162-
History/Process Knowledge. THE AIR SAMPLES ARE TAKEN IN DUPLICAT PER RSP.7.02 AND REPRESENT THE ACTIVITY OF THE ACTUAL SAMPL HYGIENE WILL ENSURE THAT THE AIRFLOW OF THE DUPLICATE FILT ACTUAL FILTER THAT IS TO BE SENT TO A OFF-SITE FACILITY. THE ST 7 02	E THAT WILL BE SENT INDUSTRIAL ER IS EQUAL TO OR GREATER THAN THE
Has the specified material ever been in an RMMA/RBA/CA or contacted DOE co	ntrolled radioactive materials? UNKNOWN
By signing below, I certify information provided in Part I of this release evalua     By signing below, I agree to comply with the specific requirements noted in Part I	ation to be true and accurate art II of this release evaluation
Sender/Custodian Date, 01/24/01	Ext: 6727
Jan Tenshy	RSFORMS-9.01-01

121

#### RADIOLOGICAL ENGINEERING

#### SPECIFIC REQUIREMENTS AND/OR COMMENTS

- The Radiological Control Technician shall surface contamination survey of the duplicate air sample cassette and the duplicate air filter per RSP 7.02. All surveys shall be recorded for both loose surface contamination for both alpha and
- ACCEPTANCE CRITIERIA FOR THE EXTERNAL PORTIONS OF THE LAPEL AIR SAMPLER SHALL NOT EXCEED 20 DPM/100cm2 OR 1000 DPM/100cm2.
- ACCEPTANCE CRITERIA FOR SWIPES TO BE SHIPPED SHALL NOT EXCEED 20 DPM/100cm2
- 4. ACCEPTANCE CRITERIA FOR THE DUPLICATE AIR FILTER SHALL NOT EXCEED 20 DPM PER FILTER
- 5. THE RCT SHALL PERFORM CONTAMINATION SRUVEYS PER RSP 7.02 on the external of each shipping package. ACCEPTANCE CRITERIA SHALL NOT EXCEED 20 DPM/100cm2 (ALPHA) OR 1000 dpm/100cm2 (beta)
- Beta surveys are not required if the facility has on record an Technical Basis Document exempting the need for Beta 6 monitoring.
- 6. The sender/custodian will provide all data to radiological engineering if any filter/swipe is above criteria listed in aection above. Radiological Engineering may average the complete shipment, if the shipment average is below the criteria listed above then the radiological engineer will sign the surveys annotating that material may be shipped.
- The sender/custodian shall retain and make available to Radiological Engineering, the chain of custody and survey records for all sample shipped under the terms and conditions of the release evaluation. The sender custodian shall provide the shipper a copy of the survey and this Release Evaluation along with the samples being sent to the analytical laboratory. This release will meet the DOT (49 CFR) requirements of less than 2 nanocurries per gram 8. 4. JOHN MANVILLE TECHNICAL CENTER OPERATES UNDER COLORADO DEPARTMENT OF PUBLIC
- HEALTH AND ENVIRONMENT RADIOACTIVE MATERIAL LICENSE 131-03 THAT EXPIRES ON MAY 31, 2003
- CASI will ensure that all requirements of this release evaluation have been satisfied prior to shipping.
- 10. CASI will retain all P/WRE DATA PACKAGES FOR AUDITING PURPOSES
- 11. IF any of the acceptance criteria listed above are exceeded the sender/custodian may utilize Release Evaluation 010124-T130C-001

12 THIS IS A UNRESTRICTED RELEASE

Evalu

Date 5/24/0/Ext. 6785

APPROVAL FOR TRANSFER/SHIPMENT

Approved

Date 01/24/01 Ext 5909

SAMPLE RELEASE 010124-T130C-002

@RAH

## --- A NUMBER EVALUATION SIGNATURE REQUIREMENTS

Release Evaluation #: 010124-T130C-002

Page 3 of \_\_3\_\_

#### Release Evaluation for Waste:

A Release Evaluation for Waste requires an evaluation and unrestricted release approval signature. The evaluation signature is by the Radiological Engineer (RE) providing the methods or criteria for unrestricted release (i.e., survey requirements, analytical requirements, no survey required, etc.) The unrestricted release approval signature for a Release Evaluation for Waste shall be a RE authorized to provide unrestricted release approval. In addition, the evaluation and unrestricted release approval signatures shall not be the same RE. The intent of this provision is to provide peer review of the evaluation and method of unrestricted release. It is important the RE take the peer review process seriously and not become a "rubber stamp" for their fellow engineer.

#### Release Evaluation for Property:

A Release Evaluation for Property requires an evaluation and unrestricted release approval signature. For a Release Evaluation for Property, the evaluation and unrestricted release signature may be the same RE. In the past, only one signature was required for property for which a RE could provide an unrestricted release on the basis of process knowledge/history

#### Release Evaluation for Samples:

Samples are any waste or material that is being shipped to an off-site facility for analysis. Samples that may be provided with an unrestricted release using process knowledge/history or standard contamination survey techniques may be authorized for shipment to an off-site facility using the signatory requirements specified for property. Samples which cannot be provided with an unrestricted release using process knowledge/history or standard contamination survey techniques shall be authorized for shipment from the Site using the methodology specified for waste, i.e., second signature being provided by a RE authorized to perform peer review and approval for shipment.

The approval for transfer/shipment section of a Sample Release Evaluation (SRE) shall be revised as noted below for samples which cannot be provide with an unrestricted release.

"The samples specified in Part 1 of this release evaluation are being provided with authorization for transport as non-radioactive materials in accordance with Department of Transportation (49 CFR) regulation. This authorization for shipment does not constitute an unrestricted release"

#### Additional Documentation:

Number of lines per section may be modified or additional pages attached to ensure adequate documentation of information necessary to perform release evaluation.

Additional pages or attachments to a release evaluation shall have the evaluation number, Page \_\_ of \_\_, initials of Radiological Engineer signing approval for transfer/shipment and date.

13







A Jacobs Engineering Group Company

#### Interoffice Memorandum

DATE

March 1, 2001

TO

Jerry Anderson, RISS Project, Bldg T886A, X6438

**FROM** 

Lee Ann Holwager, RISS Project - IH&S, Bldg T886A, X2406

**SUBJECT** 

ASBESTOS SAMPLE RESULTS, BUILDING 865 – LAH-008-01

Industrial Hygiene and Safety (IH&S) collected a bulk sample of floor tile on February 19, 2001 to determine whether it contained asbestos The sample was from 9"X9" tan floor tile located in Building 865 Room 101 in front of door 1 Sample results indicate the floor tile contains 5% chrysotile

When the sample was collected there was some damage to the 9"X9" floor tile in the area, cracking and breakage along the edge of approximately 4 tiles. After the sample was collected, the damaged area was covered with 6" duct tape. It is IH&S opinion that the floor tile is in a safe configuration as long as the damaged area remains taped until it can be abated.

If you have any questions regarding this matter, please feel free to contact me

Cc M J Adams R J Bittenger 865 IH&S

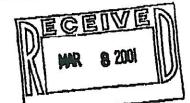
121/

1 Sample # (Bldg-Y-M-D-P#-S#) 8 65 02 1 9 2c	1 Sample # (Bldg-Y-M-D-P#-S#) 8 65 02 1 9 2001 0 1 0 0 single through		ROCKY FLATS PLANT INDUSTRIAL HYGIENE BULK SAMPLE FORM	APLE FORM
2. Process Title.	Characterization of damaged floor	or 6 Analytical Sample Method	ole Method PLM	
Subprocess Title		7	vars RES	15404-1
4 Building/OU Etc	865	8 Lab Method	PLM	
5 Chain of Custody Seal #	1# OIROISS		None	
10 Sample # (Bidg-Y-M-D-P#-S#)	11 Location Information	12 Material Type	13 Bulk Sample Description	14 Results
865-02192001-04-10	BBLES Room 101 Mest infront	Floor tile	Grey 4:1c 9x9(B)	A: ND Aspectos
	•		nith hellow resin (A)	B: 5% Chrysotile
	o		5	r
15 Sampled by/Date.	Sampled by/Date. Lee Ann Holuscopy 2/19/01	16 Checked by/D	16 Checked by/Date (Check Back of Form) ( Manual )	der 02/2801

/ JE 46722 (9/91)

P. 02





Assistos – Tem, Pom, Plm, & etals - aa, flassafur ORNE HARTICULATES CHAL BARTIOLE ANALYSIS

ADIA LAB LO 101833

# ESERVOIRS ENVIRONMENTAL

1927 GRANT STREET

DENVER, COLORADO 80203-1107

(900) 679-7374

(203) h20-1668

PAX (203) 603-0195

March 2, 2001

Mr. Chuck Hoelzel Kaiser-Hill Analytical Services Division Rocky Flats Environmental Technology Site 10808 Highway 93, Unit B - Bldg. 881 Golden, CO 80403-8200

Dear Mr. Nocleel:

Reservoirs Environmental Services, Inc. (RES, Inc.) has analyzed one bulk material sample by Polarized Light Microscopy (PLM) for asbestos content as per your request and results were telephoned to your office. PLM was used to analyze the bulk materials in compliance with guidelines ostablished by the USEPA (EPA/600/R-93/116). The Analytical Results are presented in Table I

RES Job# 75404-1 has been assigned to this study. This report is considered highly confidential and the sole property of Kaiser-Will Analytical Services Division RES, Inc. will not discuss any part of this study with personnel other than those of the client. The results described in this report only apply to the samples analyzed. Samples will be disposed of after sixty days unless longer storage is requested. The US EPA guideline was developed for use on friable building materials and recommends the use of additional analyses for non-friable materials such as floor tiles. RES, Inc recommends additional analyses to confirm negative PLM results on floor tiles. This report must not be used to claim endorsement of products or analytical results by NVLAP or any agency of the U.B Government. If you bhould have any questions about this report, please feel free to call me at 830-1986.

Sincerely,

Jeanne Spancar Orr

President

MW/jh

Analyst(s): Paul D. Loscalzo

Paul F. Knappe

Rich Wegrzyn

DOES NOT CONTAIN OFFICIAL USE ONLY INFORMATION

Name/Org EMCBC Chass and ale 10/6/08 OK forsuble doos,

RESERVOIRS ENVIRONMENTAL SERVICES, INC. TOH 30-0136 NVLAP Accredited Laboratory #1896

TABLE I. PLM BULK ANALYSIS, PERCENTAGE COMPOSITION BY VOLUME

RES 75404-1
Kaiser-Hill Analytical Services Division
O1R0155, Learn Holwager
February 21, 2001
PLM Short Report, Bulk
3-5 Day Clent Project: Date Samples Received: Analysis Type: Turnaround: RES Job Number: Client.

Client	다 <b>마</b>	1		Portion /	Portion ASBESTOS CONTENT Non-Asbestos	Non-Asbestos	
Sample Number	Number	<b>5 &gt; 0</b>	Description	of Total Sample (%)	BY LAYER	Fibrous Components (%)	Components (%)
		<b>b.</b>			Mineral Vieusi Estimate (%)		
865-02192001-01-10	EM 527053	A Yellow resin B Tan tile	resin B	92 D	ND Chrysotife 5	00	100
ND = None Detected TR = Trace, < 1% Vieuse Estimate		Inem-Act =   Point Count 7	Trem-Act = Tremoffle-Actinofite Analyst: PFK Point Count Trees = Observed but not countable under protocol, < 0.25%	under prote	Analyst PFK pool, < 0.25%		90 C

# RESERVOIRS ENVIRONMENTAL SERVICES, INC. PLM ASBESTOS ANALYSIS - LAB BLANK/RECOUNT

P	-W WODED I CO	ANAL 1010 - LAI	5 DLAI	INKECOU	N I	
Lab Sample#:	75404	RES#:		527	053	
Prepared By:		Date Pre	pared:			
		SUB-PART: PERCENT:	<u>A</u>	B	<u> </u>	D
ASBESTOS FIBERS CHRYSOTILI AMOSITE CROCIDOLIT TREMOLITE- ANTHOPHYL	E ACTINOLITE			1-5		
TOTAL ASBE	stos		<u></u>	4	-	
PART:  A B C D	PHYSICAL DESCI YELL RESTA THYN TILL	/ ~				
ORIGINAL ANALYZI QC ANALYZED BY:	ED BY:	Am Lu		DATE ANAI		127/01



RFP F 3791 32 (7/95) Formerly RF-47530

Rocky Flats Environmental Technology Site Golden, CO 80402-0464 Safety and Hygiene Chain of Custody Record and Analysis Request

Page / of /	Lab													Time/Date	Time/Date	Time/Date	Time/Date	- 1°		oroken								
First Layer Date of Mici	S)	tood.												T <sub>I</sub>	TIE	T	Tim	0100100										
	REMARKS	1	H .	-														Received by	Received by	Received by	Received by	Seal# (Release #)	Condition of Seal	_ Broken	e e	nts		Blue - Onginator
	nal	14 14 141 41												Re	Re	Be	Re	Seal#	Condition	_J	Signature	Comments		41				
	P Personal A Area B Bulk	- / Inc							1					shed by	shed by	Relinquished by	Relinquished by	Analysis Request	□ يو			(		Green - Sample Custodian				
Bldg/Ext	MEDIA	NIM												Relinquished by	Relinquished by				Industrial Hygiene Sample	ŧ	Other	San	Other	Green - San				
	SAMPLE TIME/	+1 1					10.1	<i>‡</i>						Date	ate	ate	ate	Analysis	Industrial Hy	] å	isnu .	Asbesto	24 2 Bush Bush					
YE	VOLUME	۷۱۶				_								Time/Date	1 03 T	Time/Date	Time/Date		(		Service	1	Standard	Vellow - I ab Conv				
· / Title	ANALYZE FOR	+20				<i>/</i>								Received by	Received by	Received by	Received by			-7221	whigh.	54671	51100	Oncinator				
11/11	ANAL	Debete												Rece	Rece	Rece	Rece	nstruction		166	TOT	FFC	ase Reginens	White - Return to Originator				
Name of Originator	1BER 1#/S#	11-11-12		1										yd bər	od by	yd be	od by	Report and Billing Instruction	Verbal To	Fax To	Report To	Bill To	P O #/Release Lab	White				
	SAMPLE NUMBER Bldg/Y/M/D/P#/S#	1211 6														Relinquished by	Relinquished by	Relinquished by	Relinquished by	Repo			_	0	0			
Nan	SAI	-77-	.,,												K_				Kaiser-Hill	RMRS	ssoc	DynCorp	WSI 123	1				

Property Waste Sample											
RELEASE EVALUATION FORM Page 1 of 3											
Release Evaluation No <u>.:010220-T886A-001 EXTENDED: NO</u> EXPIRES.:Charge No.: n/a_											
PART I SENDER/CUSTODIAN ACKNOWLEDGEMENT											
Description of Property/Waste/Sample To Be Released/Transferred  Tile sample & mastic taken from front entry way of B865											
Current Location B865											
Destination Reservoirs Environmental Laboratories, Denver, CO											
New Recipient/Custodian Reservoirs Environmental Laboratories, Denver, CO											
History/Process Knowledge. The materials described in this release evaluation were located in the front office area (entry-way) of B865. This area undergoes routine radiological surveys and has never shown areas of elevated radioactivity over the past several years. There is little or no concern for radiological contamination on the floor tile in this area.											
Has the specified material ever been in an RMMA/RBA/CA or contacted DOE controlled radioactive materials? NO											
By signing below, I certify information provided in Part I of this release evaluation to be true and accurate     By signing below, I agree to comply with the specific requirements noted in Part II of this release evaluation											
Sender/Cust Date 2/20/01 Ext 2406											
PART II RADIOLOGICAL ENGINEERING											
SPECIFIC REQUIREMENTS AND/OR COMMENTS.											
SURVEY REQUIRED											
The samples listed below will require fixed radiological surveys											
SAMPLE NOS 865-02192001-01-10											
RCT perform a representative survey in accordance with RSP 07 02 of the surface of each sample. Obtain total surface activity measurements for alpha & beta activity. Removable activity will not be measured due to the nature of the samples (i.e., tile and mastic are smaller than 100 cm <sup>2</sup> and do not lend themselves to removable surveys). A PAT survey alone will provide radiological information on the nature of this sample.											
Radiological Engineer Review radiological surveys And if survey documentation is below the required limits, process release evaluation to indicate an unrestricted free-release											
Evaluated_  Radiological Engineer  Rock Neve an											
APPROVAL FOR TRANSFER/SHIPMENT											
Approve Date <u>02/2/01</u> Ext <u>5%9</u> Pager <u>2079</u>											

(3)

### PROPERTY/WASTE RELEASE EVALUATION SIGNATURE REQUIREMENTS

Release Evaluation #: <u>010220-T886A-001</u> Page 2 of <u>3</u>

#### **Release Evaluation for Waste:**



A Release Evaluation for Waste requires an evaluation and unrestricted release approval signature. The evaluation signature is by the Radiological Engineer (RE) providing the methods or criteria for unrestricted release (i.e., survey requirements, analytical requirements, no survey required, etc.). The unrestricted release approval signature for a Release Evaluation for Waste shall be a RE authorized to provide unrestricted release approval. In addition, the evaluation and unrestricted release approval signatures shall not be the same RE. The intent of this provision is to provide peer review of the evaluation and method of unrestricted release. It is important the RE take the peer review process seriously and not become a "rubber stamp" for their fellow engineer.

#### Release Evaluation for Property:

A Release Evaluation for Property requires an evaluation and unrestricted release approval signature. For a Release Evaluation for Property, the evaluation and unrestricted release signature may be the same RE. In the past, only one signature was required for property for which a RE could provide an unrestricted release on the basis of process knowledge/history.

#### **Release Evaluation for Samples:**

Samples are any waste or material that is being shipped to an off-site facility for analysis. Samples that may be provided with an unrestricted release using process knowledge/history or standard contamination survey techniques may be authorized for shipment to an off-site facility using the signatory requirements specified for property. Samples which cannot be provided with an unrestricted release using process knowledge/history or standard contamination survey techniques shall be authorized for shipment from the Site using the methodology specified for waste, i.e., second signature being provided by a RE authorized to perform peer review and approval for shipment

The approval for transfer/shipment section of a Sample Release Evaluation (SRE) shall be revised as noted below for samples which cannot be provide with an unrestricted release

"The samples specified in Part 1 of this release evaluation are being provided with authorization for transport as non-radioactive materials in accordance with Department of Transportation (49 CFR) regulation This authorization for shipment does not constitute an unrestricted release"

#### **Additional Documentation:**

Number of lines per section may be modified or additional pages attached to ensure adequate documentation of information necessary to perform release evaluation

Additional pages or attachments to a release evaluation shall have the evaluation number, Page \_\_ of \_\_, initials of Radiological Engineer signing approval for transfer/shipment and date

132

@RAH

	i		*	5 B W E	2. 1073111	, \$	19 . 19 10	100 20						
<b>.</b>			MENT DAT			•	Oantam							
	Eberline	_Mfg	N/A	. –	NE Electr		Survey Type: Contamination							
Model _	SAC-4	_Model _		Model	DP-6	Buildii			ıla					
Serial #	1081	_Serial #	-	Senal #			Location East vestibule Purpose Sample for asbestos evaluation							
Cal Due	8/9/01	_Cal Due	+	Cal Due			se San	npie ior a	spesios e	/aiuation				
Bkg _	<u>03 cpmα</u>	_ ~	cpmα		5 cpr		<b>.</b>		N/A					
Eff _	33 % Eff			_Eff	21 67 %	RWF	′#		IN/A					
MDA _	20 dpmα MDA N/A dpmα			MDA	60 dpr		0/4	9/01	Time	. 11	100			
1	Chadas	146	AT/A	N 44 m		Date		19/01		<i>y</i>	<del></del>			
Mfg	Eberline	_Mfg 	N/A		NE Electr		RCT							
Model _	BC-4	_Model _	Model	DP-6			Emp							
Serial #	842	Senal #	-	Senal #					7		Emb			
Cal Due	12/28/01	-	+	Cal Due			N/A	۸	/ N	/A /	N/A			
Bkg	43 6 cpmβ 25 %	_BK9	cpmβ			nβ RCT	Print n			ature	Emp #			
MDA	200 dpmβ		¥ % N/A dpmβ	Eff	30 59 % 446 dpn		Phaca	ame	Olgi	ature	City #			
1 <sup>mD</sup> —	ZOO upmp	- MDV	N/A apmp	- MDA	440 upi	пр								
PRNRE	N#: 0102	20-T886A-	001 Page	3513										
Comme	nts: Surve	ev perform	ed on piece	of floor t	ile from th	e vestibul	e of bldg 8	365 east	side Tile p	iece appro	ximately			
	one b	y three inc	ches Area o	of floor wi	nere piece	removed	scanned f	or alpha	and beta c	<u>ontaminatı</u>	on, no			
			nts found ab			_								
				SI	JRVEY F	RESULTS	<u> </u>	@1	シ 同					
۱														
						•	<u>ALPHA</u>	$\mathcal{Q}$	الأك	BETA	10/100			
Swipe		LC	OCATION		т	Swipe	Direct	Wipe	Swipe	Direct	Wipe			
#	<del></del>	965.02	192001-01-	10		dpm/100cm2 < 20	dpm/100cm2 < 60	dpm/wipe N/A	dpm/100cm2 < 200	dpm/100cm2 < 446	dpm/wipe N/A			
N/A		003-02	N/A	10		N/A	N/A	N/A	N/A	N/A	N/A			
N/A			N/A			N/A	N/A	N/A	N/A	N/A	N/A			
N/A			N/A			N/A	N/A	N/A	N/A	N/A	N/A			
N/A			N/A			N/A	N/A	N/A	N/A	N/A	N/A			
N/A			N/A			N/A	N/A	N/A	N/A	N/A	N/A			
N/A			N/A			N/A	N/A	N/A_	N/A	N/A	N/A			
N/A			N/A			N/A	N/A	N/A	N/A	N/A	N/A			
N/A			N/A			N/A	N/A	N/A	N/A	N/A	N/A			
N/A			N/A			N/A	N/A	N/A	N/A N/A	N/A N/A	N/A N/A			
N/A N/A			N/A			N/A N/A	N/A N/A	N/A N/A	N/A N/A	N/A N/A	N/A N/A			
N/A N/A			N/A N/A		<u></u>	N/A N/A	N/A	N/A	N/A	N/A	N/A			
N/A	<del></del>		N/A	- 1	<del></del>	N/A	N/A	N/A	N/A	N/A	N/A			
N/A			N/A		<del>  </del>	N/A	N/A	N/A	N/A	N/A	N/A			
N/A	<del>- 10</del> 1		N/A	<del></del>		N/A	N/A	N/A	N/A	N/A	N/A			
N/A	<del></del>		N/A			N/A	N/A	N/A	N/A	N/A	N/A			
N/A	<del></del>		N/A			N/A	N/A	N/A	N/A	N/A	N/A			
N/A			N/A			N/A	N/A	N/A	N/A	N/A	N/A			
N/A			N/A			N/A	N/A	/ /N/A	/N/A	N/A	N/A			
Date Re	viewed 2/	21/01	RS Superv	ision										
Date Reviewed 2/21/01 RS Supervision														

\33

Rev 02/00

Denis Solts 5592 Gil Cordova 5592

# Management Union Safety Team Safety Observation Card

Observation: Steel Workers Doffing Roce perators

O(0,0) Incorrectly in DE area. Steel workers cutting

O(0,0) Conduit without Ret support. Cutting pipe.

Voes without wetting Conduit cut with write in

Note pipe and not labeled. No following piant

Atandard Concern about aspestes tile + Akatement Concern about abbestos tile + Abatement Date Occurred/Identified. 2-14-01 Location of Issuer. 866

Employee Name Rac Stockham James Klaverstrom Phone: Pa212-1656 No follow-up necessary Optional Information: Bidg. Madi Stop:

Please call and follow-up with me

SAFETY, it's a mustil